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THE ATTITUDES TOWARD AND INTERESTS IN PHYSICAL ACTIVITY
OF EDMONTON SECONDARY SCHOOL STUDENTS

by

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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Attitudes Toward and Interests in Physical Activity of Edmonton Secondary School Students," submitted by Darwin Micheal Semotiuk in partial fulfilment of the requirements for the degree of Master of Arts.

ABSTRACT

The purpose of the study was to determine and explain current attitudes toward and interests in physical activity of secondary school students.

Nine hundred and ninety-five students from six high schools in Edmonton, Canada, were randomly selected and divided by grade and sex. The subjects responded to three inventories (developed by Kenyon) concerning their attitudes and interests toward physical activity. Additional information concerning psychological and sociological phenomena was also collected. The inventories that were used included the semantic differential, general information inventory and the psychological and sociological variables inventory.

The data were subjected to various statistical treatments, which included: analysis of variance, Duncan's new multiple range test (with Kramer's modification for unequal N's), chi-square, frequency distributions and Hoyt reliabilities.

The four subpopulations expressed favorable attitudes toward physical activity as a social experience, aesthetic experience, as a means for catharsis and for health and fitness. Less favorable attitudes were expressed toward physical activity as the pursuit of vertigo, as an ascetic experience, and as games of chance. Physical activity as an aesthetic experience was significantly higher in girls than in boys. A significantly less favorable attitude towards physical activity as an

ascetic experience was expressed by grade ten boys and girls in comparison to grade twelve boys. A high degree of interest in sports as identified by participation, attendance, television viewing, and the reading of newspapers, books, and magazines was clearly evident. In this respect, boys expressed a greater interest than the girls.

The main conclusions arising from the results were:

1. The attitude towards physical activity, as held by secondary school students, was generally favorable.
2. Interest in physical activity was considered to be definitely influenced by the effect of communication media, although the exposure to sports was limited.
3. The semantic differential as a measuring instrument in this inventory was shown to have moderately high reliability and was considered to be quite useful for detecting differences between attitudes.
4. Secondary school students expressed the desire to participate in a greater variety of physical activities.

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CHAPTER I

INTRODUCTION

An understanding of the social and psychological significance of sport and physical activity necessitates careful attention to the theoretical and empirical tools employed by workers in the social and behavioral disciplines. Among the more promising social psychological units of analysis is that of attitude. Although attitude dynamics are not fully understood, sufficient progress has been made to warrant their use in the realm of physical activity. The adequate characterization and measurement of attitudes in this domain would permit the initiation of numerous studies, the findings from which would contribute to a better understanding of social reality; knowledge prerequisite to the development of a socio-psychological theory of sport.

Although often used with different connotations, the term attitude has been a part of psychological literature for at least a century (2). Herbert Spencer made reference to attitudes and their relationship to beliefs as early as 1862. Not much later, German experimental psychologists were describing a variety of mental and motor sets--Aufgabe or preparedness--which influenced thought and action. In 1918, attitude was given new status as a social psychological variable with the publication of the five-volume work by Thomas and Znaniecki (81), The Polish Peasant in Europe and America. These writers went so far as to define social psychology as the "scientific study of attitudes."

Definitions of attitude have been many. After surveying the history of the term, Allport (2) concluded that "Attitude connotes a neuropsychic state of readiness for mental and physical activity." Thurstone (81) defined attitude as ". . .the intensity of positive or negative effect for or against a psychological object." More recently attitude has been defined as ". . .a consistency among responses to a specified set of stimuli or social objects" (31); "a projection into the evaluative dimension of semantic space" (60); "the predisposition of the individual to evaluate some symbol or object or aspect of his world in a favorable or unfavorable manner" (37); and as "an enduring system of positive or negative evaluations, emotional feelings, and pro or con action tendencies with respect to a social object." (47)

In summary, attitude is held to be a latent or non-observable, relatively stable variable, reflecting both direction and intensity of feeling toward a particular object, whether it be concrete or abstract (39). A closer analysis has led several writers to conclude that attitudes are made up of two and sometimes three components: affective, cognitive, and action tendency.

Despite the widespread acceptance of attitude as a social psychological unit of analysis, there is no generally accepted theory of attitude formulation and change. However, important and promising work, having implications for the explanation of attitude dynamics, has appeared in recent years, including that of Heider (34), Osgood, et al. (60), Festinger (25), Katz (37), Rosenberg (66), and Kenyon (39).

Scott, writing on the contribution of physical activity to

psychological development, states (71):

Attitude is a feeling or mood relative to action. . . . It is recognized that attitudes are frequently in flux. . . . The evidence is far from adequate on questions such as:

- 1) the relative importance of different factors in affecting attitudes;
- 2) individual differences in response to these factors and 'fluidity' of attitudes;
- 3) the relationship of attitudes to actual overt response in the presence of group stimulation, and other motivating stimuli.

As to the value of attitudes, little doubt remains from educational research or experience that intent to learn, receptivity, and motivation towards learning and participation are conducive to accomplishment and lack thereof is inhibiting.

In analyzing Scott's conclusion, it becomes evident that further research is necessary in order to determine the exact values of attitude measurement.

The instruments to be used in the study are those which have been developed by Kenyon (39) at the University of Wisconsin. In searching for a conceptual framework for characterizing values held for physical activity, Kenyon found that no single psychological or sociological theory emerged as an appropriate model. Consequently, Kenyon developed a new structure based partly upon the theories and observations of others, and partly upon frequently alleged reasons for being interested in physical activities. The most recent inventories are based upon a multidimensional model with seven sub-domains: (see Figure 1).

1. Physical Activity as a Social Experience
2. Physical Activity for Health and Fitness
3. Physical Activity as the Pursuit of Vertigo
4. Physical Activity as an Aesthetic Experience
5. Physical Activity as Catharsis
6. Physical Activity as an Ascetic Experience
7. Physical Activity as Games of Chance (39,42).

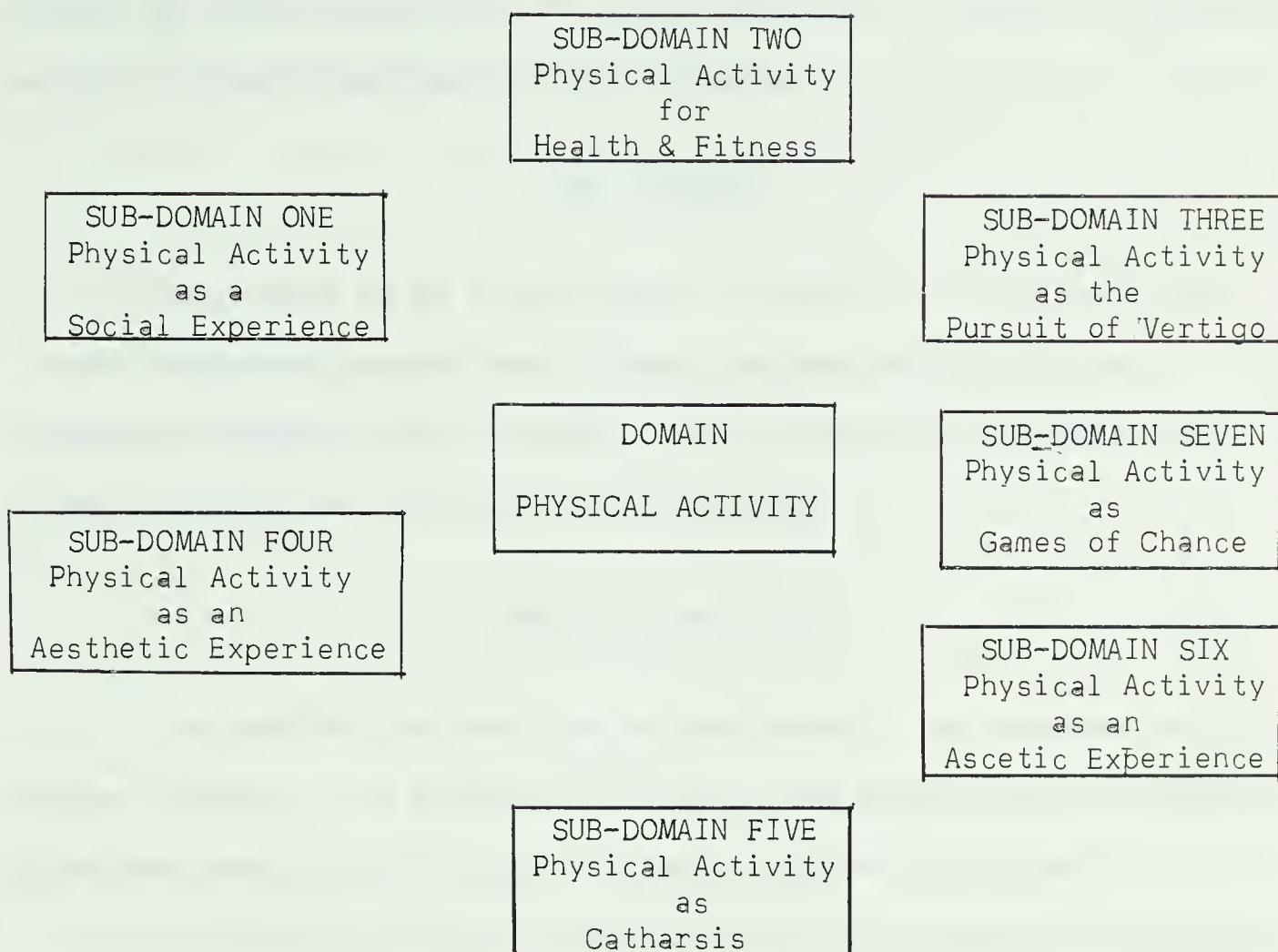


FIGURE 1

STRUCTURE OF MODEL FOR THE CHARACTERIZATION AND ASSESSMENT
OF VALUES HELD FOR PHYSICAL ACTIVITY

These seven sub-domains will be used as determinants in assessing the existing attitudes and interests toward physical activity as held by secondary students. In examining the data the investigator shall also attempt to seek explanations for certain attitudes toward and interests in physical activity.

It is intended that all the data collected in the study will also be used for comparative purposes, the results to be incorporated with similar studies done in other countries so as to provide a basis for

comparing, cross-nationally, attitudes toward and interests in, physical activity of urban secondary school children.

THE PROBLEM

The problem to be investigated is two-fold: (1) to determine current attitudes toward, and interests in physical activity of selected secondary school students. (2) To seek an explanation for those attitudes and interests thus determined.

NEED FOR THE STUDY

The need for the study can be considered to be two-fold in nature. First, it is necessary to satisfy the basic normative requirements for research of this type. These needs would include:

1. To assess present attitudes toward and interests in physical activity of a selected population group.
2. To attempt to seek an explanation of why such attitudes and interests exist in this selected population.
3. To provide information regarding existing attitudes and interests to the various institutions and groups concerned with the selected population.
4. To ascertain the relationship of interests and attitudes and the physical activity programs in the population group studied.
5. To provide information to support the possible redirection of physical activity programs in the population group studied.
6. To aid the development of a standardized test of adequate validity and reliability which could be used to incorporate various

populations.

7. To provide information that will be used as part of an international study to compare attitudes toward and interests in physical activity in such countries as Canada, United States, England and Australia.

The second basic need for this study is an important one. Since the area of sociological and psychological research in physical education is a relatively new one, it is essential that investigators conduct studies in a manner in which the results can further contribute to a field of knowledge in this particular area. In this respect, investigations should progress systematically, so as to enable each researcher to use the results of previous work in order to provide a sounder theoretical basis for either adding or deleting additional techniques and procedures. It is the expressed concern of the author that the information gathered here will, in fact, serve as guidelines in continuing the sociological and psychological research.

DELIMITATIONS

This study was delimited:

1. To a random sample of Grade 10 and Grade 12 students in six Edmonton, Alberta high schools.
2. In the procedures and instruments used.
3. In that findings will necessarily be limited to interpretation within the range of definition of terms outlined.
4. In that the testing was conducted over a two-week period.

An additional important limitation was the assumption that the responses in the inventories did actually reflect the current attitudes and interests of the subjects tested.

DEFINITION OF TERMS

Attitude. A latent, relatively stable variable reflecting both intensity and direction of feeling toward a particular object, whether it be concrete or abstract.

Physical Activity. Organized gross human movement as manifested in active games, calisthenics, sports, and dance.

Interest. A relatively persistent aspect of one's life styles, usually providing a degree of pleasure or satisfaction. For this study, interest in physical activity will be reflected through overt participation in and association with sport and physical activity.

Explanation. A persistently significant association (but not necessarily causal) between attitude or interest and certain psychological and sociological variables.

Physical Activity as a Social Experience is characterized by those physical activities whose primary purpose is to provide a medium for social intercourse, that is, to meet new people and to perpetuate existing relationships.

Physical Activity for Health and Fitness is characterized primarily by its contribution to the improvement of one's health and fitness.

Physical Activity as a Pursuit of Vertigo is considered to be those physical experiences providing, at some risk to the participant, an element of thrill through the medium of speed, acceleration, sudden change of direction, or exposure to dangerous situations, with the participant usually remaining in control.

Physical Activity as an Aesthetic Experience is often perceived of as having an aesthetic value for the individual--that is, activities are conceived of as possessing beauty or certain artistic qualities.

Physical Activity as Catharsis is perceived as providing a release of tension precipitated by frustration through some vicarious means.

Physical Activity as an Ascetic Experience is conceived as long, strenuous and often painful training and stiff competition demanding a deferment of many gratifications.

Physical Activity as Games of Chance is perceived as games and sports where chance and luck are more important than skill in determining the winner.

Secondary School Population. The secondary school population refers to all those presently enrolled in Grades 10, 11, and 12, in the Province of Alberta. For the purposes of this study, the sample is restricted to grade 10 and grade 12 students in four public and two separate schools in Edmonton.

CHAPTER II

REVIEW OF THE LITERATURE

Upon reviewing the related literature, it is apparent that research related to attitudes and interests has been carried out quite extensively for the past four decades. However, it is of significance that most of the research has been implemented without inter-disciplinary cooperation. This is especially true of physical education research. The people in physical education generally developed and carried out their tests without consultation with the associated disciplines of psychology and sociology. Cooperative research in conjunction with these two fields would have, in all probability, produced more valid testing instruments than have been available until recent years. Recent research on attitudes and interests indicates that physical educators are now going outside of their discipline to seek the assistance and cooperation of other fields in the construction and validation of test instruments and procedures.

In addition to attitude research, another important factor that must be evaluated is that of attitude explanation. That is, physical educators should attempt to explain, usually in a social or psychological context, the existence of certain attitudes. Again, research in this area has been quite extensive. However, as in attitude research, most of the information is scattered and often contradictory. A solution to the problem could come in the form of standardized instruments and procedures in order to make the results more meaningful and applicable

to different populations.

The research on attitudes in the past will be examined briefly in this review. Due to the exhaustive sources that are available, the discussion of the related literature will be confined to the following areas:

1. Review of Attitude Studies Toward Physical Activity
2. Review of Sociological, Cultural, and Psychological Factors in Determining Attitudes Toward Physical Activity
3. Attitude Measurement and Instrumentation
4. Recent Research in Developing a Conceptual Model for Characterizing Physical Activity.

REVIEW OF ATTITUDE STUDIES TOWARD PHYSICAL ACTIVITY

Scott (71), in a paper discussing the contributions of physical activity to psychological development came to three conclusions regarding attitude measurement, and the importance of it. First, that the measurement of attitudes serves as a constant evaluation of the strengths and weaknesses of program. Second, that such measures would be of value in that they could be of assistance in improving the student's and public's attitude toward physical education. Third, that attitude studies could lead to more effective instruction in physical education in colleges and schools.

Most of the attitude studies that have been undertaken have two main limitations: (1) in most cases, females are the subjects, and (a) college service classes serve as the overall means of evaluation.

A great deal of research on the attitudes of college women

toward physical activity was carried out in the 1930's and the 1950's.

Three studies by Graybeal (30) at the University of Minnesota; by Wiedemann and Howe (90) at Wellesly College; and Bullock and Alden (13) at the University of Oregon found that participation in physical education service courses positively affected girls' attitudes toward physical education. These investigators also reported that freedom of choice in activities was a major contributor to the improvement of attitude.

A study by Moore (56) indicated a highly favourable attitude toward physical activity as a means of recreation. However, she found that the average amount of time spent in physical activity was low, with approximately 50 per cent of the subjects spending less time than four hours a week. The main reasons for not spending more time on physical activity were lack of time due to the need to study, lack of companions, and outside work.

Plummer (61) conducted a study involving 400 women at the State University of Iowa, and Mary Baldwin College. On the basis of using her own test instrument, she found that a favourable attitude toward physical education existed among this particular population.

In a study conducted by Bell and Walters (6) at the University of Michigan, all the freshmen women who were taking required physical education and all the seniors who had taken required physical education were given a series of questions concerning the required program and the outside physical activities frequently participated in by the students. The freshmen, who had physical activity in high school, had

a better attitude toward physical education as an activity course, than freshmen who had no physical education in high school. They also showed more favourable attitudes than seniors who had physical education in high school. The authors indicated that there seemed to be a significant relationship between:

1. attitude and the extent to which the student enjoyed physical education classes, and
2. the extent to which the instructors are interested in the student as an individual and the extent to which the student enjoyed physical education classes.

Attitudes toward physical education activity were very favourable in a study by Broer, Fox, and Way (11) at the University of Washington. A high percentage of the 1,149 subjects tested agreed that physical education activity classes contribute to social development, and mental and physical health of the individual. Students in swimming and tennis seemed to have a more favourable attitude than the average, while those in archery a less favourable one.

Hunter (36), in a study involving college women, found strong favourable attitudes toward physical education as expressed by 142 of the 687 students who answered the questionnaire. Seventy students expressed strong unfavourable attitudes while the attitudes of the remaining students were neither highly favourable nor unfavourable to the required program.

An extensive study recently completed by Merrit (54) at the State University of Iowa to determine the relationship of selected physical, mental, emotional and social factors to recreational preferences of college women found that a highly favourable attitude toward physical activity existed in a tested population.

With the exception of one study, research in attitudes involving males has only made an appearance within the last twenty years. This one exception was Smith (77) in 1933. In an effort to determine student attitude toward required physical education at the University of Minnesota, Smith (77) presented a questionnaire to 650 male students. The study showed that 65 per cent of the group reported that they would not have enrolled in physical education had it not been required. Smith found that 72 per cent of the students learned new recreational activities they had not known before, and 91 per cent felt they had enjoyed the program. Some of the prevalent changes desired by the group were longer physical education periods, more opportunity to elect activities, and better coaching or instruction.

In a study by Nelson (58) of the personality and attitude differences associated with the elective substitution of R.O.T.C. for the physical education requirement, it was found that very different attitudes exist toward physical education between the two groups. Students who substituted reserve officers' training corps membership for physical education showed a much less favourable attitude towards sports competition, games, and athletics than those who did not substitute R.O.T.C. for physical education activities.

Both Butler (14) and Wear (89) indicate in their studies that short-term exposure to required physical education classes is not sufficient to continue with physical activity on a voluntary basis.

George (29) in a survey to appraise attitudes of certain men toward physical education and recreational activities at the University of Oregon found that, in nearly all of the subjects tested, a

favourable attitude was present. This study would possibly be subject to criticism because his sample involved only forty-two students.

Casaday (16) in his study on the effects of lectures presented to students in a required physical education program, brought forward the following points which are pertinent:

1. Most college students have a favourable attitude toward physical education, although some are more positive than others;
2. students with a background in physical education and sports have a more positive attitude than those without; and
3. the most recent physical education class is very important in determining the individual's present attitude.

Sluiter (76) in an attempt to improve the required physical education program at South Dakota State College, administered a questionnaire to all males taking the required program. The results of his study showed that college students feel a need for physical education activities as part of their educational experience. Sluiter also found that the majority of students enjoyed the program, which leads one to believe that a favourable attitude toward physical education existed.

One of the most recent studies undertaken was that by Gross (19) at the University of Oregon in 1964. He investigated the attitudes toward physical education of 938 male students entering the University of Oregon. Using the Wear Short Form A, he found that the mean of all the scores was 119.724--which indicated a favourable attitude toward physical education (a score of 90 would indicate indifference). The scores ranged from 66 to 150.

Very little work on attitudes has been done with both males and females in the sample. However, one such study was carried out by

Keogh (45). From a group of male and female college students who had undertaken Short Form A of the Wear Physical Education Attitude Inventory, he split off the high (130 plus) and low (95 minus) scorers. With these people, he conducted personal interviews to determine their physical education and athletic background and their self-ratings on attitude toward physical education. His summary statement is as follows:

Based upon descriptive information, the high groups could be characterized as physically active with high personal judgments of their physical skills and the relative importance of physical activity in their lives. The low groups were surprisingly active physically, but were very critical of their high school physical education programs and made less favourable personal judgments. As an additional observation, the validity of the Wear Inventory as a measure of attitude toward physical education is supported by the data related to the groups of high and low subjects who were consistently positive or negative in terms of responses to prepared statements, comments on high school physical education experiences, and self-ratings.

Squire (78) carried out an extensive survey of attitudes, and factors affecting them when he investigated the attitudes of senior high school boys in sixty high schools in Connecticut. Using the Wear Attitude Inventory and an interview technique, he found a favourable attitude toward physical activity to be present.

In summary, the following observations regarding attitude research are pertinent:

1. Most studies deal with selected populations, that is, either male or female college students.
2. Most of the studies attempt to determine the attitude toward required physical education at the college level.
3. Very little attitude research has been conducted involving:
 - a) the high school situation; or
 - b) a combined sample of male and female subjects.

4. Most studies found that there was a favourable attitude towards physical activity.

5. A great many of the instruments used in measuring attitudes were developed and used without proper validation.

REVIEW OF SOCIOLOGICAL, CULTURAL, AND PSYCHOLOGICAL FACTORS

IN DETERMINING ATTITUDES TOWARD PHYSICAL ACTIVITY

Literature treating physical activity as a cultural phenomenon varies from works that are largely narrative and anecdotal, such as those by Boyle (9) and by Umminger (84), to attempts at providing an explanation of the significance of sports and games in culture. Huizinga (35), Cozens and Stumpf (18), Natan (57), Roberts (65), Caillois (15), McIntosh (51), and Morton (56). However, few efforts have been made, apart from research such as that by Sutton-Smith (80) to acquire empirical data specifically for testing social or psychological theory. Realizing this, several studies have been initiated during the past three years by Kenyon (39) at the University of Wisconsin, to determine the cultural significance of physical activity for both adults and college students.

Several studies have been done in the area of determining factors which affect attitudes toward physical activity. These factors are of a sociological, cultural, or psychological nature. Because of the lack of homogeneity of these studies, the investigator shall review each significant paper separately, and in a chronological order.

Nelson (58) in a study of personality and attitude differences associated with the elective substitution of R.O.T.C. for physical

education requirement, found that personality affected the individual's attitude towards sports competition. Those students who selected R.O.T.C. over physical education showed a less favourable attitude toward physical activity.

Newson (59) administered a questionnaire to 323 junior and senior high school boys in Southern California. This study showed that most annoyances were of a personality and behavior nature. Students attitudes were influenced most by the personality and behavior of other students and the instructor. Newson concluded that certain other sources of annoyances such as lack of cleanliness and inadequate facilities could be removed. Upon reviewing this study, it appears that both the personality of the individual and the personalities of those around him appear to be factors that influence his attitude.

Biddulph (7) carried out a study of 461 Utah high school boys to discover if any relationship existed between athletic achievement, and social and personal adjustment. Using athletic achievement tests, a personality test, and scholastic records, he found a significant relationship existed. He therefore concluded that athletic achievement is a very important factor in personal and social adjustment.

A study to determine factors which constitute attitude toward a physical education program was carried out by Plummer (61). Using her own attitude test form, she tested 271 college women at Mary Baldwin College. Based on her results, she drew the following conclusions:

1. There is little relationship between teacher rating and attitude expressed in the student scores.
2. The factors affecting attitudes and interests include

competition of other activities, finance, personal response to the group, physical appearance, physical education background, physical plant, and selection of requirement.

3. Based on the results of this study, there is an indication that there is no high degree of relationship between a subject's motor ability and favourable or unfavourable attitude toward Physical Education.

Bell and Walters (6) at the University of Michigan, conducted a study to determine the relationship, if any, of past experiences in physical education to present attitudes. The investigators found that those females who had physical education in high school showed more favourable attitudes toward physical activity than those who did not. The authors also indicated that there seemed to be a significant relationship between:

1. attitude and the extent to which the student enjoyed physical education classes, and
2. the extent to which the instructors are interested in the student as an individual and the extent to which the student enjoyed physical education classes.

Broer and Holland (12) in their investigation involving college women at the University of Washington, concluded that lack of success, class size, and individual attention to students in class were all important factors influencing attitudes toward physical education.

Lozes (50) carried out a study to determine the philosophy relative to physical education of certain church denominations and to determine the effect of philosophy on program. Lozes used both the

questionnaire and interview technique to examine twenty-four different institutions. Her conclusions are as follows:

1. Church related schools in general favoured physical education.

2. The relatively less important position of physical education in the church-related institutions seemed to be due to academic influence more than religious influence.

In an extensive investigation by Squires (78) to determine attitudes and factors affecting them, senior high school boys in sixty out of the ninety-three high schools in Connecticut were tested. Squires used both the Wear Attitude Inventory and the interview technique. The conclusions of his study were as follows:

1. The quality of a physical education program as measured by the Laporte technique had no influence on the attitudes toward physical education as measured by the Wear Attitude Inventory.

2. (a) Higher per pupil costs of education do not tend to be reflected in more favourable attitudes toward physical education.

(b) Number of years of teaching had no influence on attitudes.

(c) There is no relationship between the educational experiences of a teacher, and the student's attitudes.

(d) Attitudes toward physical education are not affected by the success of the school's athletic teams.

3. Better attitudes toward physical education were found in small and medium-sized high schools. Smaller, and more frequent classes, and a closer pupil-teacher relationship could explain this.

4. Varsity athletes have a significantly more favourable

attitude toward physical education than other students.

In discussing the results, Squires stated that the following influences helped form favourable attitudes: outside opportunities in sports, appreciation of physical education purposes and activities, level of motor skill, parental attitude and example, teacher's attitude and interest, and program content. Squires stated that the following influences helped form unfavourable attitudes: dislike of having to do some activities in the program, a feeling against some of the procedures of administration of physical education classes, inferior level of motor skill, unfavourable influence of friends or of parents, teacher attitude and interest, ridicule by classmates, disability, fear of injury, and a previous traumatic experience. In his recommendations, Squires suggested the further investigation of the effects of movies, television, sports personalities, magazines, etc., in the formation of attitudes.

Beal (5) in exploring the reasons in student choice of physical education activity of 198 college women at Ohio State, found the most frequent reasons given to be: (1) to learn the activity, (2) for recreational use, and (3) to improve skill. Beal also stated that outside influences, such as those by parents, friends, and finances affected choice.

An investigation to determine the relationship between students and parent attitudes and skills of fifth grade children was carried out by Bowman (8). Her sample included 159 fifth grade children and their parents. Her conclusions were as follows:

1. No generalization or conclusion can be derived from this

study on the relationships between children's attitudes toward activity and motor performance.

2. Relationship existed between the activity attitudes of parents and the scores of pupils on motor performance salience and the activity inventories.

George (29) surveyed the attitudes of forty-two selected male students toward physical education and recreational activities at the University of Oregon. He found that their high school physical education, recreation and work experiences affected their attitude toward physical activity. On the basis of this result he concluded that previous experiences are influential in reflecting attitude.

Casaday (16) in his study of the effects of lectures presented to students in a required physical education program, had the following to say of factors that influence attitude toward physical activity:

. . . Students with a background in physical education and sports have a more positive attitude than those without; and the most recent physical education class is very important in determining the individual's present attitude.

A study to determine the attitudes of men students toward the required physical education program at South Dakota State College was undertaken by Sluiter (76). The results of the questionnaire administered to all those taking required physical education indicated that experiences in high school had little effect on attitude toward physical education at State College.

Pollei (6) conducted an investigation to determine the status of physical education relevant to high school guidance counsellors in the State of Iowa. The results of this study that have a bearing on factors

affecting attitudes is that poor attitude is instilled in the student as a result of the teacher.

Lewis (48) carried out a study involving 879 college women at the University of Georgia. The purpose of the study was to show the relationship of selected social factors to acceptance and participation in physical education. After an extensive analysis of the collected data Lewis concluded the following:

1. Social factors, educational dilemmas, cultural forces, and changing roles have affected expressed values of college women.

2. Sports have varying degrees of social acceptance. For example, for females, they are dancing, watersports, and co-educational activities, in that order.

3. Women endorse activities that they think men will endorse for them.

4. Women participate in status activities regardless of class.

5. As a result of society's influence, women are more concerned with today's concept of femininity: that is, they are concerned more with appearance, and less with health.

A study to determine the relationship of selected physical, mental, emotional, and social factors to recreational preferences of college women was carried out by Merrit (54). Her sample included college women under the age of 21 years from the State University of Iowa, and from the State University College of Education. Her conclusions in respect to the personality factor were: personality differences appear to exist between individuals liking or disliking certain types of

activity; and there was a definite difference in personality to those who like competitive athletics and those who do not. In relation to physical and mental factors, Merrit found the following: there was a relationship between motor ability and one's attitude towards the recreation program; weight devotion does not appear related to recreational preference of college women; and intelligence is not related to activity preference.

Merrit, on the basis of the results of the study, concluded that the amount of physical education in high school affected interests in this area favourably. In examining the socio-economic factors and their relationship to attitudes, Merrit found: home town size and high school size are not related to attitude; vocational choice appears to be a factor in influencing interests; religious background is a factor associated with preferences for outdoor recreational activities; and father's occupation is not associated with program likes of college women. Merrit also found that the similarities of reason for participation were for physical exercise, to be with friends, and to get out-of-doors.

Keogh (45) conducted a study on male and female college students to determine factors which affect extreme attitudes toward physical education. Using the Wear Physical Education Attitude Inventory, he divided the high and low scorers. With these individuals, he conducted personal interviews to determine their physical education and athletic background and their self-ratings on attitude toward physical activity. He found that the high groups could be characterized as physically active with high personal judgments of their physical skills and the relative

importance of physical activity in their lives. The low groups were surprisingly active physically, but were very critical of their high school physical education programs, and made less favourable judgments.

Simmons (75) conducted an investigation to evaluate present curricular offerings in boys' physical education programs in thirty-one selected secondary schools located in Northern California. One of the significant findings that Simmons came up with was that the objectives of a program as well as the level of instruction are very important factors affecting attitudes toward physical activity.

A recent study by Cross (19) attempted to determine the difference in attitudes of individuals due to exposures, and experiences undertaken before they entered college. He used the Wear Short Form A, and an information sheet to collect all the necessary data on 958 male students entering the University of Oregon. His results indicated that those individuals with more physical education classes had a more favourable attitude than those with fewer; individuals who came from smaller schools (less than 300 enrollment) had a better attitude toward physical education; and, athletes, as measured by participation in intramurals and interscholastics, had a more favourable attitude than others.

Frank (27) examined the relationship of some selected socio-economic factors to changes in physical education programs in certain localities in Missouri. The socio-economic factors selected were financial support, legislative and administrative support, and racial integration of schools. His investigation technique included a survey of physical education teachers and those related and investigation of various documents. His study only dealt with the changes since 1946.

Frank's conclusions were as follows:

1. Legislation was responsible for improving quality, etc., of the physical education program.
2. There is a direct relationship between the quality of a program and the financial support available.
3. Racial integration had little effect on the physical education program during the time studied but was found to facilitate more harmonious relations in the area of interscholastics.

Perhaps one of the more important recommendations of this study was the need for a comprehensive investigation of environmental influences and their interrelationship with one another. Frank noted that factors such as urban renewal, shifts in population, sociological background of people, and economic resources should be incorporated in future studies.

In summary, the following observations can be made with respect to studies on factors affecting attitudes:

1. Most studies used college males or females as their sample.
2. There appears to be a wide diversification in the types or instruments and procedures used in collecting the data. As a result, the studies give an appearance of being unrelated and often contradictory in nature.

ATTITUDE MEASUREMENT AND INSTRUMENTATION

However latent attitudes may be, their measurement depends upon some overt behavior--that is, a response elicited by some stimulus.

Although all techniques rely on observing responses to specific stimuli, the form of each varies widely among the various approaches, from direct questioning or direct observation, to the use of attitude scales. Direct questioning is perhaps the simplest method, but has several weaknesses, including:

1. The less than perfect correlation between attitude, and expressed attitude (opinion)--that is, the reluctance of people to respond publicly consistently with the attitude which they have expressed;
2. the lack of conscious awareness of certain attitudes; and
3. the impossibility of assessing the degree of affect.

The use of verbal attitude statements is an approach attempting to overcome these limitations. By collecting several statements about the psychological object in question, a scale can be formed which measures the degree of affect, usually with satisfactory reliability.

Thurstone (82) began experimenting with similar techniques in areas where there was no corresponding physical manifestation of the phenomenon. His work not only led to the development of attitude scales with a form of interval measurement, but set the stage for psychological scaling in general--a field which now has a sizable literature.

Today, attitude scales are usually developed by:

1. specifying the domain of the psychological object in question, and defining its universe of context,
2. selecting or developing stimuli (verbal statements) to represent the domain, and

3. using either judgment or response methods with an appropriate sample to formulate scales.

Although much of the earlier work rested upon the classic approaches of Thurstone (82) and Likert (49), a number of other methods have been developed in response to limitations of these techniques.

More recent models providing new possibilities for research include the semantic differential of Osgood, et al. (60) and multidimensional scaling techniques perfected by Torgerson (83). The latter technique is particularly useful since it permits simultaneous scaling of stimuli in more than one dimension, thus obviating the problematic unidimensionality assumption underlying most other techniques.

The reliability of attitude scales usually has been determined psychometrically; either through the use of internal consistency or equivalent forms. Validity, however, is another problem. Since attitude, as a latent variable, is impossible to observe directly, face or intrinsic validity is used, that is, items are shown to be logically representative of the attitude universe in question. Another approach is to use reference groups, whose attitudes are inferred from the actions of their members. A possible procedure that may reduce the obvious deceptiveness of this approach may include:

1. taking into account the components of attitudes,
2. paying attention to the social context of which the individual is a part, and
3. taking greater care in defining the kinds of behavior which a given attitude scale is expected to predict.

Perhaps one of the better scales that has been constructed to

measure attitude toward physical activity is one by Wear (89). Wear, in 1951, published the results of his investigations on attitudes made at the State University of Iowa. This was the first major attempt to construct a simple and reliable attitude scale for the measurement of attitudes toward physical education. Based on a five-point Likert scale, it has now become known as the Wear Physical Education Attitude Inventory. It is presently being widely used in its various forms as a standard measure of attitudes toward physical education by the profession throughout the country.

Discussing the inventory's merits in the original publication, Wear stated:

The reliability of the Inventory as determined by the split halves technique was 0.96 for 472 cases which became 0.98 when raised by the Spearman-Brown formula. The product moment correlation between Inventory scores and graphic self-ratings for 464 individuals who rated themselves was plus 0.88.

Wear (88) published a further refinement of his inventory and made available two equivalent, thirty statement forms; Short Form A, and Short Form B. At this time he indicated that both short forms included equal weightings in the physiological/physical, mental/emotional, social and general area statements on which the original inventory was based. Using a sample of one hundred college freshmen responding to both short forms, Wear found that comparisons of paired groups all showed significance at least at the five per cent level of confidence. The correlation of results between both forms was 0.96.

Broer (10) in validating the Wear scale with a sample of college women, found almost identical correlations to those published by Wear for men.

Squires (78), Cross (19), and Keogh (45) all used the Wear Attitude Inventory in their respective studies of attitudes toward physical education.

Scott (71) in discussing the possibilities and uses of the Wear Inventory made the following comments: (1) it was developed specifically for the use of physical education, and (2) it is flexible enough that other investigators have been able to modify it.

A number of investigators have developed and used their respective attitude and interest scales in areas of attitude research. These include: Graybeal (30), Weidemann and Howe (90), Bullock and Alden (13), Beal (5), Biddulph (7), George (27), Lewis (48), Plummer (61), Sluiter (76), Merrit (54), Smith (77), Hunter (36), Bell and Walters (6), Moore (55), Newson (59), Nelson (58), and Bowman (8).

Research literature addressed to the subject of attitude toward physical activity often contains studies that suffer from three shortcomings. First, sufficient attention has not been paid to the characterization of "physical activity" in its broadest sense, with efforts to date usually limited by the inquiry of a somewhat restricted domain such as "physical education," "team game competition," or "sports." Second, the instruments used seldom were based upon a thorough application of appropriate test construction procedure so long a part of the measurement literature, such as item analysis and psychological scaling techniques. Third, where scaling procedures were used, such as in the development of instruments by Wear (88,89), Richardson (64), and Adams (1), there has been a failure to account for the possible, and indeed likely, multidimensionality of the domain in question.

RECENT RESEARCH ON DEVELOPING A CONCEPTUAL MODEL FOR
CHARACTERIZING PHYSICAL ACTIVITY

In order to overcome the problems previously stated, a project under Kenyon (38-44) at the University of Wisconsin was undertaken, having two related objectives: (1) to generate models facilitating the characterization of attitudes toward physical activity; and (2) to construct within the context of a given model, relatively independent univocal scales for determining attitudes toward physical activity.

In order to fulfil such objectives requires both a priori and empirical methods. In general, a model is conceived and verbal stimuli though to represent the components of the model are identified. The efficacy of the model and the stimuli is then tested empirically.

In all, three hypothetical models were postulated, the first two of which will be described only briefly. The initial attempt consisted of six sub-domains. These were: physical health, mind-body dichotomy, cooperation-competition, mental health, social intercourse, and patriotism. Statements thought to represent each of the sub-domains were incorporated in an inventory which was administered to a randomly selected sample of 756 adults and to a convenient group of approximately 100 college students. Intercorrelations and factor analysis of each set of data provided little evidence of a meaningful structure. Reflection upon this failure suggested several explanations for this result, including the use of too few stimuli, the possibility that sub-domains were in themselves multidimensional, or the possibility that the deduced sub-domains were not all on the same level of discourse.

Based in part upon an analysis of the results of the first attempt, a second structure was formulated, also consisting of six sub-domains: physical activity as a social experience, for health and fitness, as the pursuit of vertigo, as an aesthetic experience, as a recreational experience, and as a competitive experience.

In order to test the integrity of this configuration, the universe of content was more systematically defined for each sub-domain. Seventy-three Likert-type attitude statements were evaluated by judges, revised, incorporated into an inventory, and administered to 176 college men and women. A factor analysis of the item intercorrelation matrix yielded a solution that warranted the assumption of multidimensionality. For two of the sub-domains--physical activity as a recreational experience and as a competitive experience--the results were still unsatisfactory, in that collecting the items thought to represent each did not account for any sizeable amount of the common factor variance; again suggesting lack of precision in the original definitions. The revision of the conceptual basis for these sub-domains together with the apparent efficacy of the other form, was the basis of a third model, the nature and integrity of which will be described in some detail.

The rationale underlying each of the seven sub-domains thought to represent the perceived instrumental value of physical activity was as follows:

1. Physical activity as a Social Experience: Claims that participation in physical activity can meet certain social needs of individuals have long emanated from professional sources. For this study, Kenyon postulated that lay opinion would be similar, that is, physical

activity engaged in by groups of two or more is perceived by many as having some social value. Thus physical activity as a social experience was characterized by those physical activities whose primary purpose is to provide a medium for social intercourse, that is to meet new people and to perpetuate existing relationships. Although such events as school or college dances and bowling immediately come to mind, almost any physical activity can serve such a purpose, either incidentally or by design.

2. Physical activity for Health and Fitness: A sizeable proportion of contemporary western people, whether active themselves or not, believe that physical activity has the capacity to enhance personal health. Writings of physical educators, and the statements of the medical profession, all serve to suggest that it is plausible to believe that many feel health through physical activity is both possible and desirable. Therefore, it was posited that some physical activity can be characterized primarily by its contribution to the improvement of one's health and fitness. Obviously, calisthenics and other conditioning exercises are for such a purpose, but conceivably, many activities could be similarly oriented.

3. Physical activity as the Pursuit of Vertigo: The suggestion that certain physical activities can provide a medium for pursuing vertigo comes from Callois (15). Games based on the pursuit of vertigo:

. . .Consist of an attempt to momentarily destroy the stability of perception and inflict a kind of voluptuous panic upon an otherwise lucid mind.

Various physical activities. . .provoke these sensations, such as the tight rope, falling or being projected into space, rapid rotations, sliding, speeding, and acceleration of vertilinear

movement separately or in combination with gyrating movement. . . . Men surrender to the intoxication of many kinds of dance, from the common but insidious giddiness of the waltz to the many mad, tremendous, and convulsive movements of dances. They derive the same kind of pleasure from the intoxication stimulated by high speed on skis, motor cycles, or in driving sports cars.

Physical activity as the pursuit of vertigo has been retained as a sub-domain, since empirical evidence showed it to have considerable promise. However, the chance element has been attenuated so that physical activity as the pursuit of vertigo is considered to be those physical experiences providing, at some risk to the participant, an element of thrill through the medium of speed, acceleration, sudden change of direction, or exposure to dangerous situations, with the participant usually remaining in control. In that he usually approaches vertigo without actually achieving it, the experience becomes the pursuit of vertigo. It is possible that the instrumental value here is latent. The participant may not recognize vertigo as the common element, but rather view sports such as skiing, diving, heavy weather sailing, mountain climbing, sky diving, etc., as apparently unrelated.

4. Physical activity as an Aesthetic Experience: The proposition is advanced here that many people believe that at least some forms of physical activity are generally pleasing to the eye, and have a capacity for satisfying aesthetic tastes. Although some may consider skilled movement as beautiful in a broad prospective from ballet to Olympic gymnastics, others would insist on a much narrower range of physical activities--perhaps restricted to the creative and expressive movements primarily found in dance. The important point is that physical activity is often perceived of as having aesthetic value for

the individual--that is, activities are conceived of as possessing beauty or certain artistic qualities.

5. Physical activity as Catharsis: Upon analysis of the results of using "recreational activities" as a category of physical activity, it became apparent that the concept is too nebulous to be useful, and that it does not sufficiently characterize the function of a certain kind of activity for the individual. It seemed that both these difficulties might be overcome by narrowing the conception to physical activity perceived as providing a release of tension precipitated by frustration through some vicarious means. In this sense, physical activity can have a cathartic function in that it can provide a release from frustration and so-called pent-up emotions created by pressures of modern living.

6. Physical activity as an Ascetic Experience: An attempt to conceive certain forms of physical activity providing a "competitive" experience did not prove successful. Either the choice of stimuli was poor, or the concept "competitive" is not a unitary phenomenon. It was reasoned that if sport provides a medium for the expression of superiority, then those who aspire to high levels of achievement, regardless of the sport, recognize the need to delay gratification and to be able to endure long periods of strenuous periods of training. The associated punishment of the body (although seldom inflicting permanent damage) is seen by some to be somewhat akin to religious ascetism. Championship performance today requires athletes to undergo a kind of "ascetic" experience whereby physical activity for him becomes long, strenuous, and often painful training and stiff competition demanding a deferrment

of many gratifications.

If the conceptual structure proposed above was to have merit as a model serving to represent the socio-psychological characteristics of physical activity, Kenyon (38) felt that two conditions were to be met: (1) each sub-domain must be univocal, that is, internally consistent, and (2) the various sub-domains must be relatively independent of one another.

In essence, this approach represents the testing of the model for construct validity. To accomplish this objective, data was acquired from college freshmen consisting of responses to Likert-type statements thought to be representative of each of the sub-domains of the hypothesized model. Many of these stimuli were revisions of statements used to test previous forms of the model. Separate inventories for men and women were used, using sex-appropriate statements where necessary. Response styles were evaluated, and item analyses performed providing criteria for selecting the best statements for subsequent analyses. The degree of internal consistency of each sub-domain was determined using Hoyt's analysis of variance approach. Coefficients were maximized by rescaling the a priori weights of the best items using a reciprocal averages procedure. The structural integrity of the model was tested using an incomplete image analysis followed by an oblique rotation of the first six factors.

Kenyon, in his discussion and summary, stated the following (42):

An attempt was made to develop a multidimensional conceptual model for characterizing physical activity from the standpoint of its perceived instrumental value for individuals. The two necessary conditions for testing the worth of the hypothesized

structure, namely, internal consistency and sub-domain independence, were sufficiently met to warrant the conclusion that the conceptual model postulated herein has some validity. This does not imply that all the dimensions of physical activity have been accounted for, nor does it imply that this is the only approach to characterizing physical activity.

Kenyon (42) established Hoyt reliabilities for each of the six scales for assessing attitude toward physical activity. These were based on samples of 353 men and 215 women (see Table I).

TABLE I

HOYT RELIABILITY SCORES FOR THE TESTING OF 353 MEN AND 215 WOMEN

Scale	Hoyt Reliability
1. Social Experience	
Men	.70 - .72 ^X
Women	.70 - .74
2. Health and Fitness	
Men	.74 - .77
Women	.79 - .82
3. Pursuit of Vertigo	
Men	.88 - .89
Women	.83 - .84
4. Aesthetic Experience	
Men	.80 - .82
Women	.83 - .85
5. Catharsis	
Men	.69 - .78
Women	.72 - .80
6. Ascetic Experience	
Men	.82 - .82
Women	.74 - .79

^XThe first coefficient is based upon a priori weights, the second based upon weights rescaled to optimize reliability.

Perhaps the most significant statement made by Kenyon in evaluating this model for characterizing physical activity is (42): "The test of a model lies in its application."

In reviewing the related literature, it is quite apparent that research involving attitudes toward physical activity is not uncommon. Perhaps the problem that faces most physical educators today is a conceptual explanation of physical activity. It is through researchers such as Kenyon that the field of physical education is beginning to find the answer to this question.

CHAPTER III

METHODS AND PROCEDURES

In order to increase the significance of this study, the procedure that was followed was based on the same one that was suggested by Kenyon at the University of Wisconsin. The study, therefore, has an additional value in that it can be used for comparative purposes.

The selected subjects were grade ten ($N = 500$) and grade twelve students ($N = 500$) attending six Edmonton secondary schools; four public schools and two separate schools. The schools were chosen on the basis of the representative socio-economic status of their areas. Selection of the schools was based on two things: one, the subjective assessment of the investigator; and two, the sale price of homes in the particular area. The latter criteria was used because no other information of this type was available. Four public schools were selected: one from a high socio-economic area, a medium-high area, a medium area, and one from a medium-low area. Two separate schools were selected: one from a medium-high socio-economic area, and one from a medium-low area.

The following steps were taken in order to receive formal permission to enter the various schools for testing. The first step taken included correspondence and interviews with the Superintendents and Supervisors of Physical Education in the Edmonton Public School Board, and the Edmonton Separate School Board. Once the study had been ratified at this level letters were sent to the principals and the physical education department heads of the schools concerned in the

study, asking permission to enter the schools under their jurisdiction. The letter (see Appendix) contained information such as the purpose of the study, methods and procedures, number of subjects and suggested testing times. This correspondence was followed up by an interview in which the matter was discussed further and the testing date and time was finalized. Upon completion of the testing, a letter was sent to all individuals connected with the study thanking them for their assistance and cooperation (see Appendix).

The subjects selected for the study, then, were grade 10 and grade 12 school students in four public and two separate schools in Edmonton. The ratio estimation technique was used to determine the number of grade ten's and grade twelve's to be tested in each school. Once these numbers had been established, the investigator went to each individual school and obtained the class lists for all grade 10 and grade 12 male and female students. Each grade ten student in the school was numbered and selected as part of the sample according to a table of random numbers. A similar procedure was followed to select the grade twelve subjects. In addition to this alternates were selected (by the same procedure), to serve as substitutes in case a subject was absent or was unable to do the test because of some other reason. In all, 496 grade ten's (236 males, 260 females), and 499 grade twelve's (237 males, 262 females) were tested. It should be noted that 895 subjects were tested at the initial testing sessions. Follow-up testing raised this number to a final total of 995.

TIME AND DURATION OF THE STUDY

The majority of the testing of the subjects was done on May 10, 1966. The follow-up testing began immediately after that date and was completed on May 20, 1966.

TEST INSTRUMENTS TO BE USED

Three different testing instruments were used (see Appendix) in order to obtain data for this study. The instruments used, along with their code names, and approximate time required for test completion, are as follows:

<u>Instrument</u>	<u>Code Name</u>	<u>Time Required</u>
1. Semantic Differential	B.A.T.	15 minutes
2. General Information Inventory	G.I.N.	15 minutes
3. Sociological and Psychological Variables Inventory	S.E.N.A.P.S.	<u>10 minutes</u>
Total		40 minutes.

TEST METHODS AND PROCEDURES

The psychological and sociological variables, and the instruments used to measure them, are similar to the ones used by Kenyon (42) in the Janesville pilot project. They are as follows:

<u>Variable</u>	<u>Measuring Procedure & Instrument</u>
A. Dependent Variables	1. Semantic Differential Scales (B.A.T.)
1. Attitude Toward Physical Activity as a	
i) social experience	
ii) for health and fitness	
iii) as the pursuit of vertigo	

Measuring Procedure & InstrumentVariables

- iv) as an aesthetic experience
- v) as catharsis
- vi) as an ascetic experience
- vii) as games of chance

2. Interest in Physical Activity

2. See Independent Variables below

B. Independent Variables

1. Interest in Physical Activity

- a) as a participant
- b) as a spectator

- c) as a consumer of mass media addressed to sport and physical activity

2. Psychological Factors

- a) Personal values and interests
- b) Body Image
- c) Self-Esteem

3. Sociological Factors

- a) Social class background
- b) Religious preference
- c) Religious devotion
- d) National origin
- e) Group affiliations
 - i) Family
 - ii) Peers

1. Characterizing physical activity according to the seven dimensions in A1 above-a three position rating scale shall be provided for each

- i) of great interest
- ii) of moderate interest
- iii) of little or no interest

c: As in 1a and 1b, but also a general score on a three-point frequency scale

- i) at least once a week
- ii) once or twice per month
- iii) less often or never.

2a: Allport-Vernon Study of Values (GIN)

2b: Semantic differential scale total score on each dimension (BAT)

2c: Rosenberg's self-esteem scale recode to three-point scale (SENAPS)

3a: Hollingshead index based upon education and occupation of head of household (GIN)

3b: Check one of major alternatives (GIN)

3c: Four-point frequency scale for degree of attendance at religious services (GIN)

3d: Birth place of parents (GIN)

3e: Family size and birth order (GIN)

3e: Major interests of close friends (GIN)

<u>Variable</u>	<u>Measuring Procedure & Instrument</u>
iii) Other	3e: Club affiliation (GIN)
f) Social desirability	3f: Crowne and Marlowe's Need for Approval scale (SENAPS).

Pre-arranged schedules of the students to be tested, and the testing times for the various schools were drawn up and delivered to the participating schools prior to the actual day of the administration of the test. A note regarding the date, time, and place of the test was given to each subject the day before the test (see Appendix). A letter to the parent or guardian informing them of their son's or daughter's selection to take part in the study accompanied the notices to the students (see Appendix).

In order to test most of the subjects on the same day, the investigator received the help of five assistants. A briefing period prior to the administration of the test served to acquaint the assistants with the scope and nature of the project as well as the testing procedure to be followed. The tests were explained in their entirety so as to properly prepare each administrator for possible questions that might arise.

In most cases, the grade ten's were tested in either their physical education period, study period or noon hour in a vacant room within the school. The grade twelve's did the test in their study period, or over the noon hour.

In all instances, the same verbal and written instructions were given prior to the test. Also, the same order of tests was adhered to

in each school.

Once the number of subjects who had written the tests had been determined, a "follow-up" testing schedule was drawn up in order to administer the test to those individuals who had been absent previously. The investigator carried out the follow-up testing in its entirety.

STATISTICAL TREATMENT

A code manual (see Appendix) and master data sheet were developed in order to simplify the task of analyzing the data. After transferring the results from the inventories to master sheets, all the information was transferred to IBM cards to facilitate computer analysis at both the University of Wisconsin and the University of Alberta.

In all, there were four IBM cards per subject. Each deck contained the following information:

Deck 1 - Attitude scores from Semantic Differential

Deck 2 - Body image scores from Semantic Differential

Deck 3 - General Information

Deck 4 - Social and Psychological variables and classification
of physical activities.

Decks 1 and 2 were analyzed at the University of Wisconsin by a program specially developed for the semantic differential scores. Decks 3 and 4 were analyzed by the computer at the University of Alberta.

The Reciprocal Averages Program (RAVE) provided a technique whereby one could quantify qualitative data. Both the attitude and body image scores were treated by this program. The actual computer program produced the following:

1. A test score for each individual.
2. A frequency distribution of the test scores.
3. A summary of the statistics of the sample,
 $N, \bar{X}, S_x, \Sigma_x, \Sigma x^2$
4. Internal consistency reliability of the instrument by means of Hoyt's Analysis of Variance method.
5. The number of subjects choosing each possible item response.

In order to describe the results, the entire sample was divided into four sub-populations: grade ten boys, grade ten girls, grade twelve boys, and grade twelve girls. Differences among these four sub-groups were examined.

The attitude and body image data were treated by the RAVE program to provide means, standard deviations, and Hoyt Reliabilities. The attitude means were then ranked and subjected to an analysis of variance test to determine the possible presence of a significant difference among the seven attitude means within a given sub-population. The means were then subjected to a Duncan's New Multiple Range Test to determine where the differences, if any, were. In addition, each attitude and body image mean underwent an analysis of variance test to see whether or not there was a significant difference among the four sub-populations. If the difference was significant, it was treated by Duncan's New Multiple Range Test with Kramer's Modification for Unequal N's.

Because the data in Deck 3 is mostly descriptive in nature, the results were presented in tables showing the frequencies and percentages of the four sub-populations. From this, chi-square tests of selected

variables were undertaken. The television means from Deck 3 were subjected to an analysis of variance and Duncan's New Multiple Range Test with Kramer's Modification for Unequal N's. The same type of analysis was conducted for the means of the Need for Approval scores, Self-Esteem scores, and Relationship with Father scores. The data from the classification of sports and physical activities results was ranked and presented in tables describing the frequencies and percentages of the four sub-populations.

CHAPTER IV

RESULTS AND DISCUSSION

I. ATTITUDES AND BODY IMAGE

Of the 995 students who took the semantic differential inventory, thirty-four had to be discarded because of the inconsistency in which they responded to the various items. This left a final total of 961 subjects for the attitude and body image scores: 225 grade ten boys, 249 grade ten girls, 232 grade twelve boys, and 255 grade twelve girls.

Differences Within a Subpopulation

Grade ten boys. The results show that grade ten boys show the most favorable attitude toward physical activity as a social experience (38.28). Catharsis (37.81) ranks second, health (36.96) ranks third, aesthetic (35.79) ranks fourth, and vertigo (34.53) ranks fifth. Grade ten boys show the least favorable attitude toward physical activity as an ascetic experience (32.80) and physical activity as games of chance (32.71). These two attitudes occupied the sixth and seventh positions respectively (Table II).

The Hoyt Reliabilities (Table III) which measure the internal consistency of the response, range from .82 (health) to .90 (aesthetic).

An analysis of variance (Table IV) indicated that there is a significant difference, at the .01 level, among the seven attitude means. Duncan's new multiple range test showed that the differences were

TABLE II
RANKING OF ATTITUDE SCORES IN THE FOUR SUBPOPULATIONS

Rank	Grade Ten		Grade Twelve	
	Boys (Mean)	Girls (Mean)	Boys (Mean)	Girls (Mean)
1	Social (38.38)	Aesthetic (38.15)	Catharsis (37.78)	Aesthetic (38.05)
2	Catharsis (37.81)	Social (37.86)	Social (37.26)	Catharsis (37.92)
3	Health (36.96)	Catharsis (37.14)	Health (36.86)	Social (37.74)
4	Aesthetic (35.79)	Health (36.38)	Aesthetic (36.48)	Health (37.23)
5	Vertigo (34.53)	Vertigo (33.87)	Vertigo (35.33)	Ascetic (33.16)
6	Ascetic (32.80)	Chance (31.88)	Ascetic (34.09)	Vertigo (32.98)
7	Chance (32.71)	Ascetic (31.87)	Chance (32.52)	Chance (32.20)

TABLE III

ATTITUDE AND BODY IMAGE MEANS, STANDARD DEVIATIONS, AND HOYT RELIABILITIES

Attitude	Boys (N=225)			Grade 10 Hoyt			Girls (N=249)		
	\bar{X}	S.D.	Reliability	\bar{X}	S.D.	Hoyt	\bar{X}	S.D.	Reliability
Social	38.28	3.28	.86	37.86	3.07	.86			
Health	36.96	3.45	.82	36.38	3.70	.83			
Vertigo	34.53	4.28	.85	33.87	4.80	.87			
Aesthetic	35.79	4.72	.90	38.15	3.34	.88			
Catharsis	37.81	3.39	.87	37.14	3.48	.85			
Ascetic	32.80	4.91	.86	31.87	5.28	.87			
Chance	32.71	5.49	.89	31.88	5.52	.89			
<u>Body Image</u>									
Ideal-Evaluative	38.31	2.25	.74	38.72	1.96	.71			
Perceived-I Evaluative	34.46	3.41	.78	35.41	3.45	.73			
Grade 12									
Boys (N=232)					Girls (N=255)				
<u>Attitude</u>									
Social	37.26	2.63	.79	37.74	2.52	.75			
Health	36.86	2.80	.78	37.23	3.58	.80			
Vertigo	35.33	3.44	.84	32.98	4.98	.89			
Aesthetic	36.48	4.10	.87	38.05	2.69	.83			
Catharsis	37.78	3.27	.85	37.92	3.67	.83			
Ascetic	34.09	4.02	.81	33.16	4.53	.87			
Chance	32.52	4.81	.88	32.20	5.17	.87			
<u>Body Image</u>									
Ideal-Evaluative	38.17	2.33	.73	38.18	2.14	.73			
Perceived- Evaluative	35.37	3.08	.81	36.57	3.02	.73			

TABLE IV

ANALYSES OF VARIANCE AND DUNCAN'S NEW MULTIPLE RANGE TEST FOR THE SEVEN ATTITUDE MEANS IN EACH OF THE FOUR SUBPOPULATIONS

	Grade Ten		Grade Twelve	
	Boys	Girls	Boys	Girls
F Test	63.40 ^X	66.70 ^X	62.36 ^X	113.74 ^X
Social-Health	NS	NS	NS	NS
Social-Vertigo	NS	NS	NS	x
Social-Aesthetic	NS	NS	NS	NS
Social-Catharsis	NS	NS	NS	NS
Social-Ascetic	x	x	NS	x
Social-Chance	x	x	x	x
Health-Vertigo	NS	NS	NS	x
Health-Aesthetic	NS	NS	NS	NS
Health-Catharsis	NS	NS	NS	NS
Health-Ascetic	NS	x	NS	x
Health-Chance	NS	x	x	x
Vertigo-Aesthetic	NS	NS	NS	x
Vertigo-Catharsis	NS	NS	NS	x
Vertigo-Ascetic	NS	NS	NS	NS
Vertigo-Chance	NS	NS	NS	NS
Aesthetic-Catharsis	NS	NS	NS	NS
Aesthetic-Ascetic	NS	x	NS	x
Aesthetic-Chance	NS	x	x	x
Catharsis-Ascetic	x	x	x	x
Catharsis-Chance	x	x	x	x
Ascetic-Chance	NS	NS	NS	NS

NS - not significant; ^X - significant at .01 level.

significant between the following sub-domains: social and ascetic, social and chance, catharsis and ascetic, and catharsis and chance. All other comparisons of attitudes were not significant.

The fact that grade ten boys showed the most favorable attitude toward physical activity as a social experience indicates boys at this age level start taking more cognizance of their social awareness. As a result, there is an increased tendency to partake in activities involving other people. The high ranking of catharsis indicates that the grade ten boys show a favorable attitude toward physical activity as a means of releasing tension. Upon the basis of the low scores for the vertigo and ascetic attitude domains, it would appear that boys at this age level do not have favorable attitudes toward doing physical activities which involve a great deal of risk or doing physical activities which require prolonged and strenuous training. A possible explanation for the low score in the vertigo sub-domain may well be the fear of injury as a result of participating in these types of activities. The explanation for the low score for physical activity as an ascetic experience could be the fact of social pressure. Social pressure in this context may very well mean that people look upon this type of an involvement as being different and away from established norms. Physical activities as games of chance scored low and would seem to indicate that these boys would rather not participate in activities which involve chance or luck, possibly for fear of losing.

The ideal evaluative body image score was 38.31, whereas the perceived evaluative body image score was 34.46. These results would appear to indicate that these boys would ideally picture themselves

as having a favorable body appearance whereas, in fact, when evaluating themselves, they seem to lack a great deal of confidence. Although these scores are rather interesting, they must be looked at with caution because of the low reliabilities--.74 and .78.

Grade ten girls (Table III). The grade ten girls show the most favorable attitude toward physical activity as an aesthetic experience (38.15). Social (37.86) ranks a close second, catharsis (37.14) ranks third, and health (36.38) ranks fourth. Vertigo (33.87), chance (31.88) and ascetic (31.87) occupy the fifth, sixth and seventh positions respectively. Grade ten girls indicated that they showed the least favorable attitudes to the three preceding sub-domains.

The internal consistency measures, as shown by the Hoyt Reliability (Table III) range from .83 (health) to .89 (chance).

An analysis of variance (Table IV) indicates that there is a significant difference, at the .01 level, among the seven attitude means. Duncan's new multiple range test showed that the differences were significant between the following sub-domains: social and ascetic, social and chance, health and ascetic, health and chance, aesthetic and ascetic, aesthetic and chance, catharsis and ascetic, and catharsis and chance.

Grade ten girls showed the most favorable attitude towards physical activity as an aesthetic experience. This result shows that girls of this age appear to interpret physical activity as the beauty of human movement. This is quite understandable as this particular type of attitude seems to be generally accepted as a predominant aspect of how females view the world around them. The high ranking of physical

activity as a social experience indicates the social consciousness that seems to be generally agreed as an ever present characteristic of all females. The rankings of catharsis and health would appear to indicate that these two attitudes are favorable to grade ten girls. The low scores of vertigo, chance and ascetic appear to be acceptable when considering what is generally conceived of as the basic nature of females. The fact is, these three attitudinal sub-domains are on the lower part of the continuum of what could be called femininity. These types of attitudes toward physical activity would call into play sports and games which could be non-feminine in nature. The occurrence of these scores could possibly be explained by two reasons: one, a necessity to do things which are considered feminine, and two, the pressure to conform to established social standards.

The ideal evaluative body image score was 38.72, whereas the perceived evaluative body image score was 35.41. The results indicate that these girls ideally evaluate themselves as having a very favorable body appearance. The lower mean of the perceived body image score shows that grade ten girls still lack much confidence in themselves. However, the low reliabilities, .71 and .73, indicate that these results must be interpreted with caution.

Grade twelve boys (Table II). The grade twelve boys show the most favorable attitude toward physical activity as catharsis (37.78). This attitude is closely followed by social (37.26), health (36.86), and aesthetic (36.48). Grade twelve boys show the least favorable attitude toward vertigo (35.33), ascetic (34.09), and chance (32.52). The

preceding attitudes occupy the fifth, sixth, and seventh positions respectively.

The internal consistency measures, as shown by the Hoyt Reliability (Table II), range from .78 (health) to .88 (chance).

An analysis of variance (Table IV) indicates that there is a significant difference, at the .01 level, among the seven attitude means. Duncan's new multiple range test showed that the differences were significant between the following attitudinal sub-domains: social and chance, health and chance, aesthetic and chance, catharsis and ascetic, and catharsis and chance.

Grade twelve boys showed the most favorable attitude toward physical activity as catharsis. This result indicates that these boys interpret, most favorably, physical activity as the release of tension. This could be explained by the fact that grade twelve boys do not have a required physical education program, and have a need for an outlet where they could release their emotions, frustrations, and tensions. The high ranking of the means for social, health, and aesthetic indicate that these boys expressed a favorable attitude toward physical activity characterized by these domains. A less favorable attitude was expressed for the attitudes of vertigo, ascetic, and chance. These low scores seem to indicate that grade twelve boys do not show a favorable attitude towards activities which are dangerous and risky as well as those which require prolonged and strenuous training. As previously stated, the low scores of these two attitudes could be explained by two reasons: one, these boys are not too enthusiastic about participating in activities in which there is an element of risk and the possibility

of an injury; and two, these boys are unprepared and not willing to sacrifice the time and effort that is necessary for an activity which requires a period of prolonged and strenuous training. It appears that the type of society we live in does not recognize such efforts to the extent that it should.

The ideal evaluative body image score was 38.17 whereas the perceived evaluative body image score was 35.37. The results indicate that grade twelve boys ideally evaluate themselves as having a favorable body image. The lower mean of the perceived body image score shows that these boys still lack a great deal of confidence in their body appearance. As previously stated, because of the low reliabilities--.73 and .81--these results must be looked upon with caution.

Grade twelve girls (Table II). The grade twelve girls showed the most favorable attitude toward physical activity as an aesthetic experience (38.05). The next three attitudes in the ranking are quite high and very close. Catharsis (37.92) ranks second, social (37.74) ranks third, and health (37.23) ranks fourth. The remaining three sub-domain means are considerably smaller and closely grouped together. Ascetic (33.16) ranks fifth, vertigo (32.98), ranks sixth and chance ranks seventh.

The internal consistency measures, as shown by the Hoyt Reliability (Table III), range from .75 (social) to .89 (chance).

An analysis of variance (Table IV) indicates that there is a significant difference, at the .01 level, among the seven attitude means. Duncan's new multiple range test showed that the differences

were significant between the attitudinal sub-domains: social and vertigo, social and ascetic, social and chance, health and vertigo, health and ascetic, health and chance, vertigo and aesthetic, vertigo and catharsis, aesthetic and ascetic, aesthetic and chance, catharsis and ascetic, and catharsis and chance.

Grade twelve girls showed the most favorable attitude toward physical activity as an aesthetic experience. As stated previously, this result could be explained as a manifestation of what is conceived to be a prominent female characteristic. The closeness of the grouping of the means of the attitudinal sub-domains of catharsis, social and health indicates that grade twelve girls interpret and express favorable attitudes toward physical activity as being inclusive of many factors. These results appear to point to the conclusion that a favorable attitude toward physical activity can be considered as the inclusion of more than one sub-domain or characteristic. Grade twelve girls showed a less favorable attitude toward physical activity as ascetic, vertigo and chance. This occurrence could be explained by three possible reasons: (1) lack of a required physical education program and proper instruction; (2) participation in activities considered non-feminine; and (3) the necessity to conform to social pressures and established standards.

The ideal evaluative body image score was 38.18, whereas the perceived evaluative body image score was 36.57. The results indicate that grade twelve girls ideally evaluate themselves as possessing a favorable body image. They also appear quite confident in their own body appearance as evaluated by themselves. As previously stated,

because of the low reliabilities--.73 and .73--these results must be looked upon and interpreted with caution.

DIFFERENCES AMONG SUBPOPULATIONS

Attitude Scores

Physical activity as a social experience (Table V). An analysis of variance of the means of the four subpopulations for the attitudinal sub-domain of social experience showed that there was a significant difference at the .01 level. Duncan's new multiple range test indicated that there was a significant difference between the grade ten boys and the grade twelve boys. A possible explanation for such an occurrence may be in the fact that boys at the grade ten level require more activities and functions which would increase their social awareness. In comparison, the grade twelve boys, as a result of the two additional years in high school have matured to a point where they have become more socially mobile.

All other comparisons showed no significant relationship.

In examining the rankings of the means, all four subpopulations indicated a most favorable attitude toward physical activity as a social experience.

Physical activity for health and fitness (Table V). An analysis of variance of the means of the four subpopulations of the attitudinal sub-domain of health and fitness showed that there was no significant difference. However, Duncan's new multiple range test indicated that there was a significant difference between the grade ten girls and the

TABLE V

ANALYSES OF VARIANCE AND DUNCAN'S NEW MULTIPLE RANGE TEST WITH
KRAMER'S MODIFICATION FOR UNEQUAL N'S FOR THE ATTITUDE
AND BODY IMAGE MEANS FOR THE FOUR SUBPOPULATIONS

	Social	Health	Vertigo	Aesthetic	Catharsis	Ascetic	Chance	Ideal	Perceived
F TEST	5.43	2.96	4.45	23.03	2.55	9.11	1.15	3.38	17.12
<hr/>									
DUNCAN'S NEW MULTIPLE RANGE TEST									
Grade 10 Boys									
vs									
Grade 10 Girls	NS	NS	NS	x	NS	NS	NS	NS	x
Grade 10 Boys									
vs									
Grade 12 Boys	x	NS	NS	NS	NS	x	NS	NS	x
Grade 10 Boys									
vs									
Grade 12 Girls	NS	NS	NS	x	NS	NS	NS	NS	x
Grade 10 Girls									
vs									
Grade 12 Boys	NS	NS	NS	x	NS	x	NS	NS	NS
Grade 10 Girls									
vs									
Grade 12 Girls	NS	x	NS	NS	NS	x	NS	NS	x
Grade 12 Boys									
vs									
Grade 12 Girls	NS	NS	x	x	NS	NS	NS	NS	x

NS - not significant; ^x - significant at .01 level.

grade twelve girls. The higher mean for the grade twelve girls could be interpreted as a maturing process in which more favorable attitudes and health practices have been established.

All other comparisons showed no significant relationship.

Upon examination of the rankings of the means, it would appear that all four subpopulations have a favorable attitude toward physical activity for health and fitness.

Physical activity as the pursuit of vertigo (Table V). An analysis of variance of the means of the four subpopulations for the attitudinal sub-domain of vertigo showed that there was a significant difference at the .01 level. Duncan's new multiple range test indicated that there was a significant difference between the grade twelve boys and the grade twelve girls. The boys showed a more favorable attitude toward this domain than the girls. For the males, it is apparently more acceptable to participate in dangerous and thrilling activities. However, this does not appear to be the case for the girls. They are expected to take part in sports and games which do not put them in this situation. This could account for the significant difference attained here.

All other comparisons showed no significant relationship.

Upon examination of the rankings of the means, it would appear that all four subpopulations have a less favorable attitude toward physical activity as the pursuit of vertigo.

Physical activity as an aesthetic experience (Table V). An analysis of variance of the means of the four subpopulations for the

attitudinal sub-domain of aesthetic showed there was a significant difference at the .01 level. Duncan's new multiple range test indicated that there was a significant difference between the boys and the girls. The girls, both grades, showed a more favorable attitude toward this domain than the boys. The explanation for this occurrence would seem to lie in the fact that things which are beautiful and possess such a quality are considered an outstanding characteristic of femininity. In brief, this type of activity has more feminine appeal.

All other comparisons showed no significant relationship.

Upon examination of the rankings of the means, both grade ten and grade twelve girls expressed their favor by ranking this attitude the highest, whereas for both grade twelve boys and grade ten boys, it was ranked fourth.

Physical activity for catharsis (Table V). An analysis of variance of the means of the four subpopulations for the attitudinal sub-domain of catharsis showed that there was no significant difference. Duncan's new multiple range test also indicated the same.

Upon examination of the rankings of the means, it would appear that all four subpopulations have a most favorable attitude toward physical activity for catharsis.

Physical activity as an ascetic experience (Table V). An analysis of variance of the means of the four subpopulations for the attitudinal sub-domain of an ascetic experience showed that there was a significant difference at the .01 level. Duncan's new multiple range

test indicated that there was a significant difference between the following groups: grade ten boys and grade twelve boys, grade ten girls and grade twelve boys, and grade ten girls and grade twelve girls.

Grade twelve boys showed a more favorable attitude than grade ten boys. This could possibly be attributed to maturity in which there is a better understanding and appreciation of the idea that strenuous training requires sacrifice and dedication. This could be the same reason why grade twelve boys and grade twelve girls showed a more favorable attitude than grade ten girls, toward physical activity as an ascetic experience.

All other comparisons showed no significant relationships.

Upon examination of the rankings of the means, it would appear that all four subpopulations have a less favorable attitude toward physical activity as an ascetic experience.

Physical activity as games of chance (Table V). An analysis of variance of the means of the four subpopulations for the attitudinal sub-domain of chance showed that there was no significant difference. Duncan's new multiple range test also indicated the same result.

Upon examination of the rankings of the means, it would appear that all four subpopulations have less favorable attitudes toward physical activity as games of chance. This could be due to the fact that chance should not be characterized as a sub-domain of physical activity.

Body Image Scores

Ideal-evaluative (Table V). An analysis of variance of the means of the four subpopulations for the body image scores of ideal evaluative showed there was no significant difference. Duncan's new multiple range test also indicated the same.

Upon examination of the rankings of the means, it would appear that all four subpopulations ideally evaluate themselves as having a very favorable body image. This is entirely plausible because of the manner in which the semantic differential was constructed. However, caution in interpreting the body image scores must be observed, due to the low reliabilities.

Perceived-evaluative (Table V). An analysis of variance of the means of the four subpopulations for the body image scores of perceived evaluative showed that there was a significant difference at the .01 level. Duncan's new multiple range test indicated that all relationships, with the exception of grade ten girls and grade twelve boys, differed significantly at the .01 level.

Two facts are particularly worthy of note: first, the differences between the boys and the girls should be noted. From the data, it would appear that the girls have a more favorable perception of themselves. It appears that they possess more self-confidence than the boys do. Second, the differences between grade ten students and grade twelve students are interesting. It would seem that the two additional years of high school can assist and do assist in developing one's self-confidence. However, as stated before, the body image scores

must be viewed with caution.

II. GENERAL INFORMATION

Allport-Vernon Personal Values and Interests Scale

Theoretical matters (Table VI). The results indicate that 21.77 per cent of the total sample expressed a great deal of interest in theoretical matters, 62.20 per cent of the total showed some interest and 16.03 per cent of the total showed little or no interest. In analyzing the four subpopulations it appears that all groups responded in a manner which showed some interest in theoretical matters. In this respect, grade ten girls led the way with 173 out of 260 subjects, or 66.54 per cent, responding in this manner. Of the grade ten boys, 28.09 per cent indicated they possessed very much interest in theoretical matters.

TABLE VI
INTEREST IN THEORETICAL MATTERS OF FOUR SUBPOPULATIONS

Sex and Grade Level	Very Much No.	Very Much %	Some No.	Some %	Little or None No.	Little or None %	No Response	Total
Grade 10 Boys	66	28.09	140	59.57	29	12.34	1	236
Grade 10 Girls	45	17.31	173	66.54	42	16.15	0	260
Grade 12 Boys	55	23.40	146	62.13	34	14.47	2	237
Grade 12 Girls	50	19.08	158	60.31	54	20.61	0	262
TOTAL	216	21.77	617	62.20	159	16.03	3	995

That which is practical and useful (Table VII). The data indicate that 23.19 per cent of the total sample expressed very much interest in that which is practical and useful, 58.67 per cent of the total showed some interest, and 18.15 per cent of the total showed little or no interest. In analyzing the four subpopulations, it appears that all groups responded in a manner which showed some interest in that which is practical and useful. Of the grade ten boys, 28.51 per cent, showed a great deal of interest in this variable, while 32.77 per cent of the grade twelve boys showed a great deal of interest; whereas only 16.15 per cent of the grade ten girls and 16.79 per cent of the grade twelve girls expressed this feeling. In showing little or no interest in that which is practical and useful, the responses indicate that 26.54 per cent of the grade ten girls and 22.14 per cent of the grade twelve girls felt this way, as compared to 13.19 per cent of the grade ten boys and 9.36 per cent of the grade twelve boys.

TABLE VII

INTEREST IN THAT WHICH IS PRACTICAL AND USEFUL OF FOUR SUBPOPULATIONS

Sex and Grade Level	Very Much		Some		Little or None		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	67	28.51	137	58.30	31	13.19	1	236
Grade 10 Girls	42	16.15	149	57.31	69	26.54	0	260
Grade 12 Boys	77	32.77	136	57.87	22	9.36	2	237
Grade 12 Girls	44	16.79	160	61.07	58	22.14	0	262
TOTAL	230	23.19	582	58.67	180	18.15	3	995

That which is beautiful (Table VIII). The data indicate that 47.07 per cent of the total sample expressed very much interest in that which is beautiful, 41.11 per cent of the total showed some interest, and 11.82 per cent of the total showed little or no interest. The grade ten girls (56.20 per cent) and grade twelve girls (58.78 per cent) showed very much interest as compared to the grade ten boys (33.19 per cent) and grade twelve boys (37.87 per cent). The responses seem to indicate that females are more interested than males in things which are beautiful. The low percentages of grade ten girls (4.65 per cent) and grade twelve girls (6.11 per cent) that expressed little or no interest in this variable substantiate the previous statement.

TABLE VIII
INTEREST IN THAT WHICH IS BEAUTIFUL OF FOUR SUBPOPULATIONS

Sex and Grade Level	Very Much No.	Very Much %	Some No.	Some %	Little or None No.	Little or None %	No Response	Total
Grade 10 Boys	78	33.19	108	45.96	49	20.85	1	236
Grade 10 Girls	145	56.20	101	39.15	12	4.65	2	260
Grade 12 Boys	89	37.87	106	45.11	40	17.02	2	237
Grade 12 Girls	154	58.78	92	35.11	16	6.11	0	262
TOTAL	466	47.07	407	41.11	117	11.82	5	995

That which involves other people (Table IX). The data indicate that 61.90 per cent of the total sample expressed very much interest in that which involves other people, 34.58 per cent of the total showed some interest and 3.53 per cent showed little or no interest. The

responses seem to indicate that females--grade ten girls (72.31 per cent) and grade twelve girls (71.37 per cent)--showed very much interest as compared to males--grade ten boys (53.19 per cent) and grade twelve boys (48.51 per cent). It appears that both males and females show very much or some interest in that which involves other people. This is further substantiated by the low percentages in the little or no interest responses.

TABLE IX
INTEREST IN THAT WHICH INVOLVES OTHER PEOPLE OF FOUR SUBPOPULATIONS

Sex and Grade Level		Very Much No.	Very Much %	Some No.	Some %	Little or None No.	Little or None %	No Response	Total
Grade 10 Boys	125	53.19	96	40.85	14	5.96	1	236	
Grade 10 Girls	188	72.31	70	26.92	2	0.77	0	260	
Grade 12 Boys	114	48.51	108	45.96	13	5.53	2	237	
Grade 12 Girls	187	71.37	69	26.34	6	2.29	0	262	
TOTAL	614	61.90	343	34.58	35	3.53	3	995	

Politics (Table X). The data indicate that 18.16 per cent of the total sample expressed very much interest in politics, 46.52 per cent showed some interest and 35.32 per cent of the total showed little or no interest. In examining the four subpopulations it appears that the males--grade ten boys (26.39 per cent) and grade twelve boys (27.23 per cent)--showed very much interest as compared to the females--grade ten girls (10.42 per cent) and grade twelve girls (10.31 per cent).

The high percentages in the little or no interest responses indicate that there are a great number of boys and girls at this age level that express very little interest in politics.

TABLE X
INTEREST IN POLITICS OF FOUR SUBPOPULATIONS

Sex and Grade Level	Very Much No.	Very Much %	Some No.	Some %	Little or None No.	Little or None %	No Response	Total
Grade 10 Boys	62	26.38	99	42.13	74	31.49	1	236
Grade 10 Girls	27	10.42	132	50.97	100	38.61	1	260
Grade 12 Boys	64	27.23	102	43.40	69	29.36	2	237
Grade 12 Girls	27	10.31	128	48.85	107	40.84	0	262
TOTAL	180	18.16	461	46.52	350	35.32	4	995

Religious matters (Table XI). The data indicate that 34.38 per cent of the total sample expressed very much interest in religious matters, 43.85 per cent of the total showed some interest, and 21.77 per cent of the total showed little or no interest. In examining the four subpopulations it appears that females are more interested in religious matters than males. Of the grade ten girls, 36.54 per cent, and 44.66 per cent of the grade twelve girls expressed very much interest as compared to 27.23 per cent of the grade ten boys and 27.66 per cent of the grade twelve boys feeling the same way. The males--grade ten boys (30.64 per cent) and grade twelve boys (28.09 per cent)--showed little or no interest as compared to the females--grade ten girls

(16.15 per cent) and grade twelve girls (13.74 per cent).

TABLE XI
INTEREST IN RELIGIOUS MATTERS OF FOUR SUBPOPULATIONS

Sex and Grade Level	Very Much No.	Very Much %	Some No.	Some %	Little or None No.	Little or None %	No Response	Total
Grade 10 Boys	64	27.23	99	42.13	72	30.64	1	236
Grade 10 Girls	95	36.54	123	47.31	42	16.15	0	260
Grade 12 Boys	65	27.66	104	44.26	66	28.09	2	237
Grade 12 Girls	117	44.66	109	41.60	36	13.74	0	262
TOTAL	341	34.38	435	43.85	216	21.77	3	995

Participation in Physical Activity

Participation in physical activity as a social experience (Table XII). Of the total sample, 51.86 per cent participate in physical activity as a social experience at least once per week, 33.67 per cent of the total participate once or twice per month and 14.47 per cent of the total participate less often or never. In examining the four subpopulations it appears that the majority of subjects in the sample, with the exception of grade twelve girls (43.89 per cent), participate in physical activity as a social experience at least once per week. The data seem to indicate that participation in physical activity as a social experience is a quite common occurrence.

Physical activity for health and fitness (Table XII). Of the total sample, 59.30 per cent participate in physical activity for

TABLE XII
PARTICIPATION IN PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	126	53.39	77	32.63	33	13.98	0	236
Grade 10 Girls	150	57.69	81	31.15	29	11.15	0	260
Grade 12 Boys	125	52.74	75	31.65	37	15.61	0	237
Grade 12 Girls	115	43.89	102	38.93	45	17.18	0	262
TOTAL	516	51.86	335	33.67	144	14.47	0	995

TABLE XIII
PARTICIPATION IN PHYSICAL ACTIVITY FOR HEALTH AND FITNESS

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	186	78.81	34	14.41	16	6.78	0	236
Grade 10 Girls	171	65.77	60	23.08	29	11.15	0	260
Grade 12 Boys	143	60.34	58	24.47	36	15.19	0	237
Grade 12 Girls	90	34.35	115	43.89	51	21.76	0	262
TOTAL	590	59.30	267	26.83	138	13.87	0	995

health and fitness at least once per week, 26.83 per cent of the total participate once or twice per month, and 13.87 of the total participate less often or never. In examining the four subpopulations, it appears that the majority of subjects in the sample, with the exception of grade twelve girls (34.35 per cent), participate in physical activity for health and fitness at least once per week. The responses indicate that participation in physical activity for health and fitness is a common occurrence.

Physical activity as a thrill (Table XIV). Of the total sample, 27.24 per cent participate in physical activity as a thrill but involving some risk at least once per week, 34.57 per cent of the total participate once or twice per month, and 38.19 per cent of the total participate less often or never. In examining the data it appears that this type of physical activity attracts males more than females. This is substantiated by the fact that 40.25 per cent of the grade ten boys and 37.97 per cent of the grade twelve boys participate at least once per week as compared to 21.92 per cent of the grade ten girls and 11.07 per cent of the grade twelve girls.

Physical activity as beauty in human movement (Table XV). Of the total sample, 15.39 per cent participate in physical activity as beauty in human movement at least once per week, 26.56 per cent of the total participate once or twice per month, and 58.05 per cent of the total less often or never. In examining the data it appears that all four subpopulations participate in this type of physical activity less often

TABLE XIV

PARTICIPATION IN PHYSICAL ACTIVITY AS A THRILL BUT INVOLVING SOME RISK

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	95	40.25	93	39.41	48	20.34	0	236
Grade 10 Girls	57	21.92	87	33.46	116	44.62	0	260
Grade 12 Boys	90	37.97	89	37.55	58	24.47	0	237
Grade 12 Girls	29	11.07	75	28.63	158	60.31	0	262
TOTAL	271	27.24	344	34.57	380	38.19	0	995

TABLE XV

PARTICIPATION IN PHYSICAL ACTIVITY AS THE BEAUTY IN HUMAN MOVEMENT

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	29	12.29	62	26.27	145	61.44	0	236
Grade 10 Girls	60	23.08	73	28.08	127	48.85	0	260
Grade 12 Boys	25	10.55	45	18.99	167	70.46	0	237
Grade 12 Girls	39	14.94	84	32.18	138	52.87	1	262
TOTAL	153	15.39	264	26.56	577	58.05	1	995

or never. In this respect, it appears that the males--grade ten boys (61.44 per cent) and grade twelve boys (70.46 per cent)--participate less than the females--grade ten girls (48.85 per cent) and grade twelve girls (58.05 per cent).

Physical activity for the release of tension (Table XVI). Of the total sample, 45.88 per cent participate in physical activity for release of tension at least once per week, 33.70 per cent of the total participate once or twice per month and 20.42 per cent of the total participate less often or never. In examining the data it appears that participation in physical activity for release of tension is quite common among all four subpopulations. Once again, there appears to be a slight difference between males and females. In this case, 48.51 per cent of the grade ten boys and 54.01 per cent of the grade twelve boys participate at least once per week as compared to 43.08 per cent of the grade ten girls and 38.93 per cent of the grade twelve girls for the same measure.

TABLE XVI
PARTICIPATION IN PHYSICAL ACTIVITY FOR THE RELEASE OF TENSION

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	114	48.51	76	32.34	45	19.15	1	236
Grade 10 Girls	112	43.08	84	32.31	64	24.62	0	260
Grade 12 Boys	128	54.01	72	30.38	37	15.61	0	237
Grade 12 Girls	102	38.93	103	39.31	57	21.76	0	262
TOTAL	456	45.88	335	33.70	203	20.42	1	995

Physical activity as prolonged and strenuous training (Table XVII). Of the total sample, 18.79 per cent participate in physical activity as prolonged and strenuous training at least once per week, 19.30 per cent of the total participate once or twice per month and 61.91 per cent of the total participate less often or never. It seems that participation in physical activity for this purpose is not a common practice. This is indicated by the high percentages in the less often or never category. Once again, a difference between the males and females is evident. Grade ten boys, 24.05 per cent, and grade twelve boys, 24.05 per cent, participate at least once per week as compared to 15.00 per cent of the grade ten girls and 8.02 per cent of the grade twelve girls for the same response.

TABLE XVII

PARTICIPATION IN PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Res- ponse	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	70	29.66	71	30.08	95	40.25	0	236
Grade 10 Girls	39	15.00	47	18.08	174	66.92	0	260
Grade 12 Boys	57	24.05	51	21.52	129	54.43	0	237
Grade 12 Girls	21	8.02	23	8.87	218	83.21	0	262
TOTAL	187	18.79	192	19.30	616	61.91	0	995

Physical activity as games of chance (Table XVIII). Of the total sample, 13.78 per cent participate in physical activity as games of chance at least once per week, 31.19 per cent of the total participate once or twice per month, and 55.03 per cent of the total participate less often or never. The high percentages in the less often or never category seem to indicate that participation in physical activity as games of chance is not a common practice. Once again, a difference between the males and females is evident; 23.31 per cent of the grade ten boys and 18.14 per cent of the grade twelve boys participate at least once per week, as compared to 9.27 per cent of the grade ten girls and 5.73 per cent of the grade twelve girls for the same response.

TABLE XVIII

PARTICIPATION IN PHYSICAL ACTIVITY AS GAMES OF CHANCE

Sex and Grade Level	At Least Once Per Month		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	55	23.31	82	34.75	99	41.95	0	236
Grade 10 Girls	24	9.27	81	31.27	154	59.46	1	260
Grade 12 Boys	43	18.14	72	30.38	122	51.48	0	237
Grade 12 Girls	15	5.73	75	28.63	172	65.65	0	262
TOTAL	137	13.78	310	31.19	547	55.03	1	995

Best Friends Participation in Physical Activity

Physical activity as a social experience (Table XIX). Of the total sample, 47.54 per cent indicated that their best friends participate in physical activity as a social experience at least once per week, 41.01 per cent of the total participate once or twice per month, and 11.46 per cent of the total participate less often or never. The high percentages in the at least once per week category indicate that the subjects' best friends participate in physical activity as a social experience quite often. In this respect, grade ten girls, with 54.23 per cent, rank the highest. There does not appear to be that much of a difference among the responses of the four subpopulations.

TABLE XIX

BEST FRIENDS PARTICIPATION IN PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	106	44.92	101	42.80	29	12.29	0	236
Grade 10 Girls	141	54.23	95	36.54	24	9.23	0	260
Grade 12 Boys	110	46.41	102	43.04	25	10.55	0	237
Grade 12 Girls	116	44.27	110	41.98	36	13.74	0	262
TOTAL	473	47.54	408	41.01	114	11.46	0	995

Physical activity for health and fitness (Table XX). Of the total sample, 40.34 per cent indicated that their best friends participate in physical activity for health and fitness at least once per week, 35.51 per cent of the total participate once or twice per month, 24.14 per cent of the total participate less often or never. In examining the four subpopulations, there appears to be a difference between the responses for the grade tens and the responses for the grade twelves. A total of 54.24 per cent of the grade ten boys, and 49.03 per cent of the grade ten girls indicated that their best friends participate in physical activity for health and fitness as compared to 37.13 per cent of the grade twelve boys and 22.14 per cent of the grade twelve girls for the same response.

TABLE XX
BEST FRIENDS PARTICIPATION IN PHYSICAL ACTIVITY FOR HEALTH AND FITNESS

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	128	54.24	76	32.20	32	13.56	0	236
Grade 10 Girls	127	49.03	78	30.12	54	20.85	1	260
Grade 12 Boys	88	37.13	91	38.40	58	24.47	0	237
Grade 12 Girls	58	22.14	108	41.22	96	36.64	0	262
TOTAL	401	40.34	353	35.51	240	24.14	1	995

Physical activity as a thrill (Table XXI). Of the total sample, 24.22 per cent indicated that their best friends participate in physical activity as a thrill but involving some risk at least once per week, 35.48 per cent of the total participate once or twice per month, 40.30 per cent of the total participate less often or never. Upon examination of the four subpopulations it appears as though there is a difference between the male and female responses; 38.14 per cent of the grade ten boys and 32.07 per cent of the grade twelve boys indicated that their best friends participate in physical activity as a thrill but involving some risk as compared to 15.77 per cent of the grade ten girls and 12.98 per cent of the grade twelve girls for the same response.

TABLE XXI

BEST FRIENDS PARTICIPATION IN PHYSICAL ACTIVITY AS A THRILL
BUT INVOLVING SOME RISK

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	90	38.14	82	34.75	64	27.12	0	236
Grade 10 Girls	41	15.77	98	37.69	121	46.54	0	260
Grade 12 Boys	76	32.07	95	40.08	66	27.85	0	237
Grade 12 Girls	34	12.98	78	29.77	150	57.25	0	262
TOTAL	241	24.22	353	35.48	401	40.30	0	995

Physical activity as the beauty in human movement (Table XXII).

Of the total sample, 10.55 per cent indicated that their best friends participate in physical activity as the beauty in human movement at least once per week, 30.65 per cent of the total participate once or twice per month, and 40.30 per cent of the total participate less often or never. The results show that the majority of the subjects--62.29 per cent of the grade ten boys, 45.38 per cent of the grade ten girls, 70.46 per cent of the grade twelve boys, and 58.40 per cent of the grade twelve girls--indicated that their best friends participate in physical activity as the beauty in human movement less often or never.

TABLE XXII

BEST FRIENDS PARTICIPATION IN PHYSICAL ACTIVITY AS THE BEAUTY
IN HUMAN MOVEMENT

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Res- ponse	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	23	9.75	66	27.97	147	62.29	0	236
Grade 10 Girls	38	14.62	104	40.00	118	45.38	0	260
Grade 12 Boys	19	8.02	51	21.52	167	70.46	0	237
Grade 12 Girls	25	9.54	84	32.06	153	58.40	0	262
TOTAL	105	10.55	305	30.65	585	58.79	0	995

Physical activity for the release of tension (Table XXIII). Of the total sample, 31.79 per cent indicated that their best friends participate in physical activity for the release of tension at least once

per week, 42.66 per cent of the total participate once or twice per month, and 25.55 per cent of the total participate less often or never. Upon examining the results for the four subpopulations, it appears that there is very little difference between males and females, as well as between grade tens and grade twelves.

TABLE XXIII

BEST FRIENDS PARTICIPATION IN PHYSICAL ACTIVITY FOR THE
RELEASE OF TENSION

Sex and Grade Level	At Least Once Per Week		Once or Twice per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	77	32.63	103	43.64	56	23.73	0	236
Grade 10 Girls	89	34.23	88	33.85	83	31.93	0	260
Grade 12 Boys	84	35.44	110	46.41	43	18.14	0	237
Grade 12 Girls	66	25.29	123	47.13	72	27.59	1	262
TOTAL	316	31.79	424	42.66	254	25.55	1	995

Physical activity as prolonged and strenuous training (Table XXIV). Of the total sample, 15.81 per cent indicated that their best friends participate in physical activity as prolonged and strenuous training at least once per week, 23.16 per cent of the total participate once or twice per month, and 61.03 per cent of the total participate less often or never. The results show that the majority of the subjects--42.39 per cent of the grade ten boys, 64.48 per cent of the grade ten girls, 57.38 per cent of the grade twelve boys and 77.78 per

cent of the grade twelve girls--indicated that their best friends participate in physical activity as prolonged and strenuous training less often or never. There also appears to be a slight difference between males and females; 22.03 per cent of the grade ten boys and 19.83 per cent of the grade twelve boys indicated that their best friends participated at least once per week as compared to 13.90 per cent of the grade ten girls and 8.43 per cent of the grade twelve girls for the same category.

TABLE XXIV

BEST FRIENDS PARTICIPATION IN PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	52	22.03	84	35.59	100-	42.39	0	236
Grade 10 Girls	36	13.90	56	21.62	167	64.48	1	260
Grade 12 Boys	47	19.83	54	22.78	136	57.38	0	237
Grade 12 Girls	22	8.43	36	13.79	203	77.78	1	262
TOTAL	157	15.81	230	23.16	606	61.03	2	995

Physical activity as games of chance (Table XXV). Of the total sample, 16.98 per cent indicated that their best friends participate in physical activity as games of chance at least once per week, 37.49 per cent of the total participate once or twice per month, and 45.53 per cent of the total participate less often or never. Upon examination of

the results, there appears to be a difference between males and females; 26.27 per cent of the grade ten boys and 23.21 per cent of the grade twelve boys indicated that their best friends participated at least once per week as compared to 11.54 per cent of the grade ten girls and 8.40 per cent of the grade twelve girls for the same category.

TABLE XXV

BEST FRIENDS PARTICIPATION IN PHYSICAL ACTIVITY AS GAMES OF CHANCE

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	62	26.27	93	39.41	81	34.32	0	236
Grade 10 Girls	30	11.54	89	34.23	141	54.23	0	260
Grade 12 Boys	55	23.21	108	45.57	74	31.22	0	237
Grade 12 Girls	22	8.40	83	31.68	157	59.92	0	262
TOTAL	169	16.98	373	37.49	453	45.53	0	995

Watching Physical Activity on Television

Teen dance programs (Table XXVI). Of the total sample, 54.17 per cent indicated that they watch teen dance programs on television at least once per week, 28.14 per cent indicated that they watch it once or twice per month, and 17.69 per cent watch it less often or never. The high percentages of all four subpopulations indicate that teen dance programs are quite popular among males and females of this age level. The results also indicate that teen dance programs on

television are watched more by the grade tens than the grade twelves; 60.59 per cent of the grade ten boys and 65.00 per cent of the grade ten girls watch teen dance programs on television at least once per week, as compared to 44.30 per cent of the grade twelve boys and 46.56 per cent of the grade twelve girls for the same category.

TABLE XXVI
WATCHING TEEN DANCE PROGRAMS ON TELEVISION

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	143	60.59	57	24.15	36	15.25	0	236
Grade 10 Girls	169	65.00	61	23.46	30	11.54	0	260
Grade 12 Boys	105	44.30	81	34.18	51	21.52	0	237
Grade 12 Girls	122	46.56	81	30.92	59	22.52	0	262
TOTAL	539	54.17	280	28.14	176	17.69	0	995

Exercise and physical fitness programs (Table XXVII). Of the total sample, 7.65 per cent indicated that they watch exercise and physical fitness programs on television at least once per week, 30.28 per cent indicated that they watch it once or twice per month, and 62.07 per cent watch it less often or never. Upon examination of the four subpopulations, it appears that this type of program is not watched very much. This is substantiated by the fact that 63.40 per cent of the grade ten boys, 51.15 per cent of the grade ten girls,

75.11 per cent of the grade twelve boys and 59.92 per cent of the grade twelve girls indicated they watch it less often or never.

TABLE XXVII
WATCHING EXERCISE AND PHYSICAL FITNESS PROGRAMS ON TELEVISION

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	21	8.94	65	27.66	149	63.40	1	236
Grade 10 Girls	20	7.69	107	41.15	133	51.15	0	260
Grade 12 Boys	12	5.06	47	19.83	178	75.11	0	237
Grade 12 Girls	23	8.78	82	31.30	157	59.92	0	262
TOTAL	76	7.65	301	30.28	617	62.07	1	995

Special sports events showing dangerous and thrilling sports (Table XXVIII). Of the total sample, 54.67 per cent indicated that they watch special sports events on television at least once per week, 34.57 per cent of the total indicated that they watch it once or twice per month, and 10.75 per cent watch it less often or never. The high percentages of all four subpopulations indicate that special sports events are quite popular among males and females of this age level. The results also indicate that special sports event programs are watched more frequently by males than by females. Of the grade ten boys, 75.42 per cent, and 65.40 per cent of the grade twelve boys watch this type of program on television at least once per week as compared

to 41.92 per cent of the grade ten girls and 38.93 per cent of the grade twelve girls for the same category.

TABLE XXVIII

WATCHING SPECIAL SPORTS EVENTS SHOWING DANGEROUS AND
THRILLING SPORTS ON TELEVISION

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	178	75.42	47	19.92	11	4.66	0	236
Grade 10 Girls	109	41.92	116	44.62	35	13.46	0	260
Grade 12 Boys	155	65.40	71	29.96	11	4.64	0	237
Grade 12 Girls	102	38.93	110	41.98	50	19.08	0	262
TOTAL	544	54.67	344	34.57	107	10.75	0	995

Programs showing the beauty of human movement (Table XXIX). Of the total sample, 23.64 per cent indicated that they watch programs showing the beauty of human movement at least once per week, 47.79 per cent indicated that they watch it once or twice per month, and 28.57 per cent watch it less often or never. The high percentages in the once or twice per month column shows that this type of program is somewhat popular. The results also indicate that programs showing beauty of human movement are watched more frequently by females than by males; 28.46 per cent of the grade ten girls and 27.86 per cent of the grade twelve girls watch this type of program on television at least once per week as compared to 18.64 per cent of the grade ten boys and 18.64 per

cent of the grade twelve boys for the same category.

TABLE XXIX

WATCHING PROGRAMS SHOWING THE BEAUTY OF HUMAN MOVEMENT
ON TELEVISION

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Res- ponse	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	44	18.64	115	48.73	117	32.63	0	236
Grade 10 Girls	74	28.46	124	47.69	62	23.85	0	260
Grade 12 Boys	44	18.64	104	44.07	88	37.29	1	237
Grade 12 Girls	73	27.86	132	50.38	57	21.76	0	262
TOTAL	235	23.64	475	47.79	284	28.57	1	995

College or professional sport (Table XXX). Of the total sample, 37.19 per cent indicated that they watch college or professional sport on television at least once per week, 35.58 per cent of the total indicated that they watch it once or twice per month, and 27.24 per cent watch it less often or never. The high percentages in the "at least once per week" and the "once or twice per month" columns indicates the popularity of college and professional sports on television. The results also indicate that college or professional sports are watched more frequently by males than by females; 47.03 per cent of the grade ten boys and 54.43 per cent of the grade twelve boys watch this type of program on television at least once per week, as compared to 23.46 per cent of the grade ten girls and 26.34 per cent of the grade

twelve girls for the same category.

TABLE XXX
WATCHING COLLEGE OR PROFESSIONAL SPORT ON TELEVISION

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	111	47.03	79	33.47	46	19.49	0	236
Grade 10 Girls	61	23.46	103	39.62	96	36.92	0	260
Grade 12 Boys	129	54.43	71	29.96	37	15.61	0	237
Grade 12 Girls	69	26.34	101	38.55	92	35.11	0	262
TOTAL	370	37.19	354	35.58	271	27.24	0	995

Newspaper, Books, and Clubs

How often do you read about sports and physical activity in the newspaper? (Table XXXI). Of the total sample, 53.97 per cent indicated that they read about sports and physical activity in the newspaper at least once per week, 23.52 per cent of the total indicated they read about it once or twice per month, and 22.51 per cent read about it less often or never. The high percentages in the "at least once per week" column shows that newspapers are a common way of carrying information on sports and physical activity to the masses. The results also indicate that males read about sports and physical activity in the newspaper more often than females; 63.98 per cent of the grade ten boys and 72.15 per cent of the grade twelve boys read about sports and

physical activity in the newspaper at least once per week as compared to 38.08 per cent of the grade ten girls and 44.27 per cent of the grade twelve girls in the same category.

TABLE XXXI

FREQUENCY OF READING ABOUT SPORTS AND PHYSICAL ACTIVITY
IN THE NEWSPAPER

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	151	63.98	44	18.64	41	17.37	0	236
Grade 10 Girls	99	38.08	85	32.69	76	29.23	0	260
Grade 12 Boys	171	72.15	38	16.03	28	11.81	0	237
Grade 12 Girls	116	44.27	67	25.57	79	30.15	0	262
TOTAL	537	53.97	234	23.52	224	22.51	0	995

How often do you read about sports and physical activity in magazines or books? (Table XXXII) Of the total sample, 30.85 per cent indicated that they read about sports and physical activity in magazines or books at least once per week, 41.81 per cent of the total indicated that they read books and magazines once or twice per month, and 27.34 per cent of the total read it less often or never. The high percentages among all subpopulations in the "at least once per week" and "once or twice per month" column indicate that sports articles and books are read quite frequently. Once again, the males read books and magazines more often than the females. This is substantiated by the fact

38.14 per cent of the grade ten boys and 46.84 per cent of the grade twelve boys read about sports and physical activity in magazines and books at least once per week as compared to 23.08 per cent of the grade ten girls and 17.56 per cent of the grade twelve girls in the same category.

TABLE XXXII

FREQUENCY OF READING ABOUT PHYSICAL ACTIVITY AND SPORTS
IN MAGAZINES AND BOOKS

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	90	38.14	101	42.80	45	19.07	0	236
Grade 10 Girls	60	23.08	103	39.62	97	37.31	0	260
Grade 12 Boys	111	46.84	85	35.86	41	17.30	0	237
Grade 12 Girls	46	17.56	127	48.47	89	33.97	0	262
TOTAL	307	30.85	416	41.81	272	27.34	0	995

To how many clubs or organizations (outside of school) sponsoring sports or physical activity do you belong? (Table XXXIII) Of the total sample, 21.93 per cent indicated that they belong to two or more clubs, 35.01 per cent of the total indicated that they belong to one club, and 43.06 per cent of the total belong to no clubs. In analyzing the four subpopulations, it appears that all groups responded in approximately the same manner. The high percentages in the "none" column--43.06 per cent--indicate that clubs that sponsor sports and

physical activity are not participated in very frequently. This could also be attributed to the fact that there is a limited number of this type of club located in our society.

TABLE XXXIII
NUMBER OF CLUBS OR ORGANIZATIONS BELONGED TO

Sex and Grade Level	Two or More		One		None		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	59	25.00	78	33.05	99	41.95	0	236
Grade 10 Girls	53	20.38	98	37.69	109	41.92	0	260
Grade 12 Boys	55	23.31	86	36.44	95	40.25	1	237
Grade 12 Girls	51	19.47	86	32.82	125	47.71	0	262
TOTAL	218	21.93	348	35.01	428	43.06	1	995

Television sets in the home? (Table XXXIV) Of the total sample 97.89 per cent indicated that they had a television set in their home, while 2.11 per cent of the total indicated that they do not have one. From analyzing this data, it would appear that the television set has become a common item in our homes.

Brothers and Sisters, Older Brothers and Sisters, and Parents

How many brothers and sisters do you have? (Table XXXV) The total number of respondents was 995. Of this total, fifty-two indicated they had no brothers and sisters, 225 indicated they had one, 254 indicated they had two, 197 indicated they had three, 114 indicated they had four, seventy-six indicated they had five, twenty-eight indicated they had six,

TABLE XXXIV
NUMBER OF TELEVISION SETS IN HOMES

Sex and Grade Level	Yes		No		No Response	Total
	No.	%	No.	%		
Grade 10 Boys	234	99.15	2	0.85	0	236
Grade 10 Girls	254	97.69	6	2.31	0	260
Grade 12 Boys	231	97.47	6	2.53	0	237
Grade 12 Girls	255	97.33	7	2.67	0	262
TOTAL	974	97.89	21	2.11	0	995

TABLE XXXV

NUMBER OF BROTHERS AND SISTERS

Sex and Grade Level	N	1 %	N	2 %	Number of Brothers and Sisters												
					N	3 %	N	4 %	N	5 %	N	6 %	N	7 %	N	8 %	N
Grade 10 Boys	60	26.79	61	27.23	45	20.09	25	11.16	16	7.14	6	2.68	2	0.89	3	1.34	6
Grade 10 Girls	51	20.32	72	28.69	55	21.91	33	13.15	18	7.17	8	3.19	5	1.95	4	1.59	5
Grade 12 Boys	46	20.63	66	29.60	46	20.63	27	12.11	24	10.76	6	2.69	3	1.35	3	1.35	2
Grade 12 Girls	68	27.76	55	22.45	51	20.82	29	11.84	18	7.35	8	3.27	7	2.86	7	2.86	2
Total	225	23.9	254	26.9	197	20.1	114	12.1	76	8.1	28	3.00	17	1.8	17	1.8	15
																1.6	52

seventeen indicated they had seven, seventeen indicated they had eight, and fifteen indicated they had nine or more.

How many brothers and sisters are older than you? (Table XXXVI)

The total number of respondents was 995. Of this total, 421 indicated they had no brothers or sisters older than them, 297 indicated they had one older than them, 155 indicated they had two older than them, fifty-seven indicated they had three older than them, twenty-seven indicated they had four older than them, nineteen indicated they had five older than them, nine indicated they had six older than them, two indicated they had seven older than them, seven indicated they had eight older than them, and one indicated he had nine or more older than himself.

In what country were your parents born? (Table XXXVII) More than 61 per cent (61.09 per cent) of the total sample indicated that their mother and father were born in Canada, 7.90 per cent of the total indicated that just their father was born in Canada, 12.16 per cent of the total indicated that just their mother was born in Canada, and 18.84 per cent of the total indicated that both father and mother were born outside of Canada.

Education and Occupation

How much education has the head of your household had? (Table XXXVIII) Of the total sample, 5.57 per cent indicated that the head of their household had graduate or professional training after their first college degree, 5.97 per cent indicated that the head of their household

TABLE XXXVI
NUMBER OF OLDER BROTHERS AND SISTERS

Sex and Grade Level	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	None	
Grade 10 Boys	72	50.70	38	26.76	17	11.97	3	2.11	5	3.52	2	1.41	1	0.70	4	2.82	0	0.00
Grade 10 Girls	69	47.26	44	30.14	16	10.96	7	4.79	5	3.42	4	2.74	0	0.00	0	0.00	1	0.68
Grade 12 Boys	68	50.75	40	29.85	9	6.72	10	7.46	6	4.48	1	0.75	0	0.00	0	0.00	0	0.00
Grade 12 Girls	88	57.89	33	21.71	15	9.87	7	4.61	3	1.97	2	1.32	1	0.66	3	1.97	0	0.00
TOTAL	297	51.7	155	27.0	57	9.9	27	4.7	19	3.3	9	1.6	2	0.4	7	1.2	1	0.2

TABLE XXXVII
COUNTRY OF PARENTAL BIRTH

Sex and Grade Level	Father & Mother in Home Country			Father in Home Country			Mother in Home Country			Father & Mother Not in Home Country			No Res- pone Total		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Grade 10 Boys	138	59.48	17	7.33	30	12.93	47	20.26	4	236					
Grade 10 Girls	165	63.95	19	7.36	30	11.63	44	17.05	2	260					
Grade 12 Boys	150	63.56	21	8.90	20	8.47	45	19.07	1	237					
Grade 12 Girls	150	57.47	21	8.05	40	15.33	50	19.16	1	262					
TOTAL	603	61.09	78	7.90	120	12.16	186	18.84	8	995					

TABLE XXXVIII

EDUCATION OF THE HEAD OF THE HOUSEHOLD

Sex and Grade Level	Graduate Training N	University Degree % N	Some College Training % N	High School Graduate N	Some High School N	Junior High School N	-7 Yrs Completed N	No Res- ponse N	%	%	%	%
Grade 10 Boys	10	4.27	8	3.42	21	8.97	46	19.66	55	23.50	70	29.91
Grade 10 Girls	16	6.25	23	8.98	15	5.86	38	14.84	75	29.30	67	26.17
Grade 12 Boys	14	5.93	13	5.51	25	10.59	48	20.34	54	22.88	58	24.58
Grade 12 Girls	15	5.73	15	5.73	26	9.92	51	19.47	63	24.05	66	25.19
TOTAL	55	5.57	59	5.97	87	8.81	183	18.52	247	25.00	261	26.42

had a college or university degree, 8.81 per cent indicated that the head of their household had some college training (one year or more), 18.52 per cent indicated that the head of their household had graduated from high school, 25.00 per cent indicated that the head of their household had some high school training, 26.42 per cent indicated that the head of their household had completed some junior high school and 9.72 per cent indicated that the head of their household had completed less than seven years of school.

What does the head of your household do? (Table XXXIX) Of the total sample, 7.14 per cent indicated that the head of their household was either a higher executive, a proprietor of a large concern, or a major professional; 11.53 per cent of the total indicated that the head of their household was either a business manager, a proprietor of a medium-sized business, or a lesser professional; 15.41 per cent of the total indicated that the head of their household was either an administrative person, an owner of a small independent business, or a minor professional; 22.04 per cent indicated that the head of their household was either a clerical or sales worker, a technician, or an owner of a little business; 22.96 per cent indicated that the head of their household was a skilled manual employee; 16.43 per cent indicated that the head of their household was either a machine operator or a semi-skilled employee; and, 4.49 per cent indicated that the head of their household was an unskilled employee.

TABLE XXXIX
OCCUPATION OF THE HEAD OF THE HOUSEHOLD

Sex and Grade Level	Higher Exec. & Major Profes.	Bus. Man. & Lesser Profes.	Adminis. Personnel	Sales		Skilled Workers & Technicians		Skilled Manual Employees		Machine & Semi- Skilled Employees		Op. & Employees		Un- skilled Empl. ployees		No Res- pone
				N	%	N	%	N	%	N	%	N	%	N	%	N
Grade 10 Boys	8	3.49	23	10.04	40	17.47	50	21.83	58	25.33	37	16.16	13	5.68	7	
Grade 10 Girls	23	8.98	27	10.55	43	16.80	58	22.66	55	21.48	40	15.63	10	3.91	4	
Grade 12 Boys	17	7.30	29	12.45	31	13.30	53	22.75	52	22.32	41	17.60	10	4.29	4	
Grade 12 Girls	22	8.40	34	12.98	37	14.12	55	20.99	60	22.90	43	16.41	11	4.20	0	
TOTAL	70	7.14	113	11.53	151	15.41	216	22.04	225	22.96	161	16.43	44	4.49	15	

Religious Preference and Devotion

What is your religious preference? (Table XL) Of the total sample, 26.55 per cent preferred the Catholic religion, 1.53 per cent of the total preferred the Jewish religion, 62.46 per cent of the total preferred the Protestant religion, 2.84 per cent of the total preferred some other religion, whereas 6.82 per cent of the total indicated that they had no religious preference.

TABLE XL
RELIGIOUS PREFERENCE

Sex and Grade Level	Catholic No.	Catholic %	Jewish No.	Jewish %	Protestant			None No.	None %	Other No.	Other %	No Response No.	No Response %	Total
					No.	%	No.							
Grade 10 Boys	49	20.94	1	0.43	152	64.94	25	10.68	7	2.99	2			236
Grade 10 Girls	60	23.35	6	2.33	180	70.04	7	2.72	4	1.56	3			260
Grade 12 Boys	77	33.05	3	1.29	125	53.65	22	9.44	6	2.58	4			237
Grade 12 Girls	75	28.96	5	1.93	157	60.62	13	5.02	9	3.47	3			262
TOTAL	261	26.55	15	1.53	614	62.46	67	6.82	26	2.64	12			995

How often do you attend religious services? (Table XLI) Of the total sample, 43.58 per cent attend religious services once or more per week, 16.05 per cent of the total attend once or twice per month, 28.67 per cent of the total attend less often, and 11.70 per cent of the total indicated they never attend religious services. In analyzing the four subpopulations, it appears that the females attend religious services more frequently than males; 50.60 per cent of the grade ten girls and 51.37 per cent of the grade twelve girls attend services

once or more per week as compared to 30.70 per cent of the grade ten boys and 40.17 per cent of the grade twelve boys in the same category.

TABLE XLI
RELIGIOUS DEVOTION

Sex and Grade Level	Once or More Per Week No.	Once or Twice Per Month No.	Less Often No.	Never No.	No Response %	Total
Grade 10 Boys	70 30.70	38 16.67	71 31.14	49 21.49	8	236
Grade 10 Girls	126 50.60	43 17.27	63 25.30	17 6.83	11	260
Grade 12 Boys	94 40.17	34 14.53	73 31.20	33 14.10	3	237
Grade 12 Girls	131 51.37	40 15.69	70 27.45	14 5.49	7	262
TOTAL	421 43.58	155 16.05	277 28.67	113 11.70	29	995

Attendance at Spectator Sports

How often do you attend sporting events in summer? (Table XLII) Of the total sample, 35.23 per cent indicated they attend sporting events in the summer at least once per week, 46.22 per cent indicated that they attend once or twice per month, and 18.47 per cent indicated that they attend less often or never. The high percentages in the "at least once per week" and "once or twice per month" column indicate that secondary students attend sporting events in the summer quite frequently. This is especially true of the grade twelve boys, of whom 40.25 per cent indicated they attend at least once per week and 46.61 per cent indicated they attend once or twice per month.

TABLE XLII
FREQUENCY OF ATTENDANCE AT SPORTING EVENTS IN THE SUMMER

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	79	33.47	112	47.46	45	19.07	0	236
Grade 10 Girls	90	34.88	118	45.74	50	19.38	2	260
Grade 12 Boys	95	40.25	110	46.61	31	13.14	1	237
Grade 12 Girls	86	32.95	118	45.21	57	21.84	1	262
TOTAL	350	35.32	458	46.22	183	18.47	4	995

How often do you attend sporting events in the winter? (Table XLIII) Of the total sample, 25.00 per cent indicated they attend sporting events in the winter at least once per week, 41.49 per cent of the total attend once or twice per month, and 33.51 per cent attend less often or never. Although approximately two-thirds of the total indicated they attend once or twice per month or more, it appears that attendance in the winter is somewhat lower than that in the summer.

TABLE XLIII
FREQUENCY OF ATTENDANCE AT SPORTING EVENTS IN THE WINTER

Sex and Grade Level	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
Grade 10 Boys	53	23.14	98	42.79	78	34.06	7	236
Grade 10 Girls	63	24.61	102	39.84	91	35.55	4	260
Grade 12 Boys	74	32.17	89	38.70	67	29.13	7	237
Grade 12 Girls	51	20.48	111	44.58	87	34.94	13	262
TOTAL	241	25.00	400	41.49	323	33.51	31	995

CHI-SQUARE ANALYSIS OF FORTY-FIVE RELATIONSHIPS

In all, chi-square tests were carried out for forty-five relationships. These tests were done so as to determine the significance of the relationship of the independent variables. The tests were done on all four subpopulations as well as the total sample.

Variable 1 (Table XLIV)

In examining the relationship between interest in that which is beautiful and participation in physical activity involving beauty in human movement, it was found that the relationship between the total sample, grade ten boys, and grade twelve boys were significant at the .01 level. Grade twelve girls and grade ten girls showed no significant relationship.

TABLE XLIV

CHI-SQUARE TESTS OF SIGNIFICANCE FOR SELECTED VARIABLES

Variable		B ₁₀	G ₁₀	B ₁₂	G ₁₂	Total Sample
Beautiful vs Beautiful	1	x	NS	x	NS	x
People vs Social	2	x	NS	x	NS	x
Social vs Social	3	x	x	x	x	x
Health vs Health	4	x	x	x	x	x
Thrill vs Thrill	5	x	x	x	x	x
Beauty vs Beauty	6	x	x	x	x	x
Tension vs Tension	7	x	x	x	x	x
Training vs Training	8	x	x	x	x	x
Chance vs Chance	9	x	x	x	x	x
Social vs Teen	10	NS	NS	NS	NS	NS
Health vs Physical	11	NS	NS	NS	NS	x
Thrilling vs Thrilling	12	x	x	x	x	x
Beautiful vs Beautiful	13	x	x	x	x	x
Newspaper vs Magazine	14	x	x	x	x	x
Social vs Clubs	15	x	x	x	x	x
Social vs Parents	16	NS	NS	NS	NS	NS
Health vs Parents	17	NS	NS	NS	NS	NS
Thrilling vs Parents	18	NS	NS	NS	NS	NS
Beauty vs Parents	19	NS	NS	NS	NS	NS
Tension vs Parents	20	NS	NS	NS	NS	x
Training vs Parents	21	NS	NS	NS	NS	NS
Chance vs Parents	22	NS	NS	NS	NS	NS
Social vs Education	23	x	NS	NS	NS	NS
Health vs Education	24	NS	NS	NS	NS	NS
Thrilling vs Education	25	NS	NS	NS	NS	NS
Beauty vs Education	26	NS	NS	NS	NS	NS
Tension vs Education	27	NS	NS	NS	NS	NS
Training vs Education	28	NS	NS	NS	NS	NS
Chance vs Education	29	NS	NS	NS	NS	NS
Social vs Occupation	30	NS	NS	NS	NS	NS
Health vs Occupation	31	NS	NS	NS	NS	NS
Thrilling vs Occupation	32	NS	NS	NS	NS	NS
Beauty vs Occupation	33	NS	NS	NS	NS	NS
Tension vs Occupation	34	NS	NS	NS	NS	NS
Training vs Occupation	35	NS	NS	NS	NS	NS
Chance vs Occupation	36	NS	NS	x	NS	x
Social vs Preference	37	NS	NS	NS	NS	NS
Health vs Preference	38	NS	NS	NS	NS	NS
Thrilling vs Preference	39	NS	NS	NS	NS	NS
Beauty vs Preference	40	NS	NS	NS	NS	NS
Tension vs Preference	41	NS	NS	NS	NS	NS
Training vs Preference	42	NS	NS	NS	NS	NS
Chance vs Preference	43	NS	NS	NS	NS	NS
Preference vs Devotion	44	x	x	x	x	x
Summer vs Winter	45	x	x	x	x	x

NS - Not significant; x - significant at the .01 level.

Variable 2 (Table XLIV)

In examining the relationship between interest in that which involves other people and participation in physical activity as a social experience, it was found that the total sample, grade ten boys, grade twelve boys, were significant at the .01 level. Grade twelve girls and grade ten girls showed no significant relationship.

Variable 3 (Table XLIV)

In examining the relationship between participation in physical activity as a social experience and best friends' participation in physical activity as a social experience, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 4 (Table XLIV)

In examining the relationship between participation in physical activity for health and fitness and best friends' participation in physical activity for health and fitness, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 5 (Table XLIV)

In examining the relationship between participation in physical activity as a thrill but involving some risk, and best friends' participation in physical activity as a thrill, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 6 (Table XLIV)

In examining the relationship between participation in physical activity as beauty in human movement and best friends' participation in

physical activity as beauty in human movement, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 7 (Table XLIV)

In examining the relationship between participation in physical activity for the release of tension and best friends' participation in physical activity for the release of tension, it was found that all subpopulations and the total sample were significant at the .01 level.

Variable 8 (Table XLIV)

In examining the relationship between participation in physical activity as prolonged and strenuous training and best friends' participation in physical activity as prolonged and strenuous training, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 9 (Table XLIV)

In examining the relationship between participation in physical activity as games of chance and best friends' participation in physical activity as games of chance, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 10 (Table XLIV)

In examining the relationship between participation in physical activity as a social experience and watching teen dance programs on television, all four subpopulations and the total sample showed no significant relationship.

Variable 11 (Table XLIV)

In examining the relationship between participation in physical activity for health and fitness and watching exercise and physical fitness programs on television, it was found that the total sample was significant at the .01 level. All four subpopulations showed no significant relationship.

Variable 12 (Table XLIV)

In examining the relationship between participation in physical activity as a thrill but involving some risk and watching special sports events showing dangerous and thrilling sports, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 13 (Table XLIV)

In examining the relationship between participation in physical activity as the beauty in human movement and watching television programs showing the beauty in human movement, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 14 (Table XLIV)

In examining the relationship between reading about sports and physical activity in the newspaper and reading about sports and physical activity in magazines and books, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 15 (Table XLIV)

In examining the relationship between participation in physical activity as a social experience and how many clubs sponsoring sports and physical activity belonged to, it was found that all four subpopulations and the total sample were significant at the .01 level.

Variable 16 (Table XLIV)

In examining the relationship between participation in physical activity as a social experience and the country of birth of the parents, no significant relationship was found.

Variable 17 (Table XLIV)

In examining the relationship between participation in physical activity for health and fitness and the country of birth of the parents, it was found that the four subpopulations and the total sample showed no significant relationship.

Variable 18 (Table XLIV)

In examining the relationship between participation in physical activity as a thrill but involving some risk, and the country of birth of the parents, it was found that the four subpopulations and the total sample showed no significant relationship.

Variable 19 (Table XLIV)

In examining the relationship between participation in physical activity as beauty in human movement and the country of birth of the parents, all four subpopulations and the total sample showed no significant relationship.

Variable 20 (Table XLIV)

In examining the relationship between participation in physical activity for the release of tension and the country of birth of the parents, it was found that the total sample showed significance at the .01 level. The four subpopulations were not significant.

Variable 21 (Table XLIV)

In examining the relationship between participation in physical activity as prolonged and strenuous training and the country of birth of the parents, all four subpopulations and the total sample showed no significant relationship.

Variable 22 (Table XLIV)

In examining the relationship between participation in physical activity as games of chance and the country of birth of the parents, it was found that the four subpopulations and the total sample showed no significance.

Variable 23 (Table XLIV)

In examining the relationship between participation in physical activity as a social experience and the education of the head of the household, it was found that the grade ten boys showed significance at the .01 level. The remaining three subpopulations and the total sample showed no significance.

Variable 24 (Table XLIV)

In examining the relationship between participation in physical activity for health and fitness and the education of the head of the

household, it was found that the total sample and all four subpopulations showed no significance.

Variable 25 (Table XLIV)

In examining the relationship between participation in physical activity as a thrill but involving some risk and the education of the head of the household, the four subpopulations and the total sample showed no significant relationship.

Variable 26 (Table XLIV)

In examining the relationship between participation in physical activity as the beauty in human movement and the education of the head of the household, all four subpopulations and the total sample showed no significant relationship.

Variable 27 (Table XLIV)

In examining the relationship between participation in physical activity for the release of tension and the education of the head of the household, all four subpopulations and the total sample showed no significant relationship.

Variable 28 (Table XLIV)

In examining the relationship between participation in physical activity as prolonged and strenuous training and the education of the head of the household, all four subpopulations and the total sample showed no significant relationship.

Variable 29 (Table XLIV)

In examining the relationship between participation in physical activity as games of chance and the education of the head of the household, all the four subpopulations and the total sample showed no significant relationship.

Variable 30 (Table XLIV)

In examining the relationship between participation in physical activity as a social experience and the occupation of the head of the household, all the subpopulations and the total sample showed no significant relationship.

Variable 31 (Table XLIV)

In examining the relationship between participation in physical activity for health and fitness and the occupation of the head of the household, all the subpopulations and the total sample showed no significant relationship.

Variable 32 (Table XLIV)

In examining the relationship between participation in physical activity as a thrill but involving some risk and the occupation of the head of the household, it was found that the four subpopulations and the total sample showed no significant relationship.

Variable 33 (Table XLIV)

In examining the relationship between participation in physical activity as beauty in human movement and the occupation of the head of

the household, all four subpopulations and the total sample showed no significant relationship.

Variable 34 (Table XLIV)

In examining the relationship between participation in physical activity for the release of tension and the occupation of the head of the household, all four subpopulations and the total sample showed no significant relationship.

Variable 35 (Table XLIV)

In examining the relationship between participation in physical activity as prolonged and strenuous training and the occupation of the head of the household, all four subpopulations and the total sample showed no significant relationship.

Variable 36 (Table XLIV)

In examining the relationship between participation in physical activity as games of chance and the occupation of the head of the household, it was found that the total sample and the grade twelve boys were significant at the .01 level. The remaining subpopulations were not significant.

Variable 37 (Table XLIV)

In examining the relationship between participation in physical activity as a social experience and religious preference, all four subpopulations and the total sample showed no significant relationship.

Variable 38 (Table XLIV)

In examining the relationship between participation in physical activity for health and fitness and religious preference, it was found that the four subpopulations and the total sample showed no significance.

Variable 39 (Table XLIV)

In examining the relationship between participation in physical activity as a thrill but involving some risk and religious preference it was found that the total sample and the four subpopulations showed no significance.

Variable 40 (Table XLIV)

In examining the relationship between participation in physical activity as the beauty in human movement and religious preference, it was found that the four subpopulations and the total sample showed no significance.

Variable 41 (Table XLIV)

In examining the relationship between participation in physical activity for the release of tension and religious preference, it was found that the four subpopulations and the total sample showed no significance.

Variable 42 (Table XLIV)

In examining the relationship between participation in physical activity as prolonged and strenuous training and religious preference, all the subpopulations and the total sample showed no significance.

Variable 43 (Table XLIV)

In examining the relationship between participation in physical activity as games of chance and religious preference, it was found that the total sample and the four subpopulations were not significant.

Variable 44 (Table XLIV)

In examining the relationship between religious preference and religious devotion, it was found that the four subpopulations and the total sample showed significance at the .01 level.

Variable 45 (Table XLIV)

In examining the relationship between attendance at sporting events in the summer and attendance at sporting events in the winter, it was found that all four subpopulations and the total sample showed significance at the .01 level.

IV. PHYSICAL ACTIVITIES PARTICIPATED IN, ATTENDED, AND WATCHED ON TELEVISION

In What Sport or Physical Activity Do You Like to Participate the Most
(Table XLV)

Total sample. The responses to this question indicate that the following activities, in order of preference, are the ones most participated in: swimming (16.08 per cent), dancing (15.78 per cent), football (12.96 per cent), hockey (7.54 per cent), basketball (5.63 per cent), and skiing (5.33 per cent).

Grade ten boys. For the grade ten boys, football (22.88 per cent)

TABLE XLV

PHYSICAL ACTIVITIES MOST FREQUENTLY PARTICIPATED IN

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Swimming	160	16.08
2	Dancing	157	15.78
3	Football	129	12.96
4	Hockey	75	7.54
5	Basketball	56	5.63
6	Skiing	53	5.33
	Others	356	35.78
	No or improper response	9	0.90
	TOTAL	995	100.00
GRADE TEN BOYS			
1	Football	54	22.88
2	Hockey	39	16.53
3	Swimming	32	13.56
4	Basketball	17	7.20
5	Baseball	13	5.51
6	Dancing	8	3.39
	Others	70	29.66
	No or improper response	3	1.27
	TOTAL	236	100.00
GRADE TWELVE BOYS			
1	Football	68	28.69
2	Hockey	35	14.77
3	Swimming	24	10.13
4	Skiing	13	5.49
5	Dancing	13	5.49
6	Baseball	11	4.64
	Others	69	29.10
	No or improper response	4	1.69
	TOTAL	237	100.00
GRADE TEN GIRLS			
1	Dancing	64	24.62
2	Swimming	54	20.77
3	Equestrian Sports	22	8.46
4	Skiing	18	6.92
5	Basketball	18	6.92
6	Tennis	15	5.77
	Others	69	26.54
	No or improper response	0	0.00
	TOTAL	260	100.00

TABLE XLV (Continued)

Rank	Physical Activity	Numer of Responses	Percentage of Total
GRADE TWELVE GIRLS			
1	Dancing	72	27.48
2	Swimming	50	19.08
3	Skiing	19	7.25
4	Tennis	15	5.73
5	Equestrian Sports	15	5.73
6	Baseball	14	5.34
	Others	75	28.63
	No or improper response	2	0.76
	<u>TOTAL</u>	262	100.00

is the physical activity participated in most frequently. It is followed by hockey (16.53 per cent), swimming (13.56 per cent), basketball (7.20 per cent) baseball (5.51 per cent) and dancing (3.39 per cent).

Grade twelve boys. The top three activities participated in by the grade twelve boys are the same as those preferred by the grade ten boys. They include: football (28.69 per cent), hockey (14.77 per cent), swimming (10.13 per cent), skiing (5.49 per cent), dancing (5.49 per cent), and baseball (4.64 per cent).

Grade ten girls. The sample of grade ten girls indicated they participated in the following six physical activities the most: dancing (24.62 per cent), swimming (20.77 per cent), equestrian sports (8.46 per cent), skiing (6.92 per cent), basketball (6.92 per cent), and tennis (5.77 per cent).

Grade twelve girls. The grade twelve girls indicated they

participated in essentially the same physical activities as the grade ten girls. Once again, the top two activities were dancing (27.48 per cent) and swimming (19.08 per cent). These were followed by skiing (7.25 per cent), tennis (5.73 per cent), equestrian sports (5.73 per cent) and baseball (5.34 per cent).

What Sport or Physical Activity Does Your Father (or Guardian) Like to Participate in the Most? (Table XLVI)

Total sample. In response to this question, the six physical activities participated in the most by the father or guardian are as follows: golf (12.46 per cent), baseball (11.16 per cent), hockey (8.24 per cent), swimming (7.94 per cent), hunting and fishing (6.83 per cent), and curling (4.72 per cent).

Grade ten boys. The grade ten boys indicated that their father or guardian participated in the following activities the most: hockey (9.75 per cent), was first, followed by baseball (9.32 per cent), hunting and fishing (8.47 per cent), golf (8.05 per cent), swimming (8.05 per cent), and curling (4.66 per cent). The closeness in all the percentages would seem to indicate a wide variety of sports and physical activities common among the fathers (or guardians) of the subjects.

Grade twelve boys. Golf (10.55 per cent) was the activity listed as the one participated in the most by the father (or guardian) by the grade twelve boys. This was followed by baseball (10.13 per cent), hockey (9.70 per cent), hunting and fishing (7.17 per cent), swimming (5.91 per cent), and curling (5.06 per cent), in that order.

TABLE XLVI

CLASSIFICATION OF PHYSICAL ACTIVITIES MOST FREQUENTLY PARTICIPATED IN BY THE FATHER OR GUARDIAN

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Golf	124	12.46
2	Baseball	111	11.16
3	Hockey	82	8.24
4	Swimming	79	7.94
5	Hunting & Fishing	68	6.83
6	Curling	47	4.72
	Others	260	26.14
	No or improper response	<u>224</u>	<u>22.51</u>
	TOTAL	995	100.00
GRADE TEN BOYS			
1	Hockey	23	9.75
2	Baseball	22	9.32
3	Hunting & Fishing	20	8.47
4	Golf	19	8.05
5	Swimming	19	8.05
6	Curling	11	4.66
	Others	47	19.92
	No or improper response	<u>75</u>	<u>31.78</u>
	TOTAL	236	100.00
GRADE TWELVE BOYS			
1	Golf	25	10.55
2	Baseball	24	10.13
3	Hockey	23	9.70
4	Hunting & Fishing	17	7.17
5	Swimming	14	5.91
6	Curling	12	5.06
	Others	70	29.54
	No or improper response	<u>52</u>	<u>21.94</u>
	TOTAL	237	100.00
GRADE TEN GIRLS			
1	Golf	44	16.92
2	Baseball	43	16.54
3	Swimming	25	9.62
4	Hockey	20	7.69
5	Hunting & Fishing	12	4.62
6	Bowling	8	3.07
	Others	65	25.00
	No or improper response	<u>43</u>	<u>16.54</u>
	TOTAL	260	100.00

TABLE XLVI (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TWELVE GIRLS			
1	Golf	36	13.74
2	Baseball	22	8.40
3	Swimming	21	8.02
4	Hunting & Fishing	19	7.25
5	Curling	17	6.49
6	Hockey	16	6.10
	Other	77	29.39
	No or improper response	54	20.61
	TOTAL	262	100.00

Grade ten girls. Once again, golf (16.92 per cent) was listed as the sport most participated in by the father (or guardian). This was followed closely by baseball (16.54 per cent) and then swimming (9.62 per cent), hockey (7.69 per cent), hunting and fishing (4.62 per cent), and bowling (3.07 per cent), in that order.

Grade twelve girls. The grade twelve girls responded in a manner similar to that of the grade ten girls. The top six activities participated in the most were the same with the exception of one. They are, in order, golf (13.74 per cent), baseball (8.40 per cent), swimming (8.02 per cent), hunting and fishing (7.25 per cent), curling (6.49 per cent), and hockey (6.10 per cent).

Name the Sport in Which You Would Like to Participate the Most (Table XLVII)

Total sample. The total sample responded in a manner which showed skiing (10.75 per cent) as the sport that would be liked the

TABLE XLVII

PHYSICAL ACTIVITIES MOST FREQUENTLY DESIRED TO PARTICIPATE IN

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Skiing	107	10.75
2	Football	99	9.95
3	Tennis	86	8.64
4	Car Racing	84	8.44
5	Hockey	77	7.74
6	Swimming	70	7.04
	Others	446	44.83
	No or improper response	26	2.61
	TOTAL	995	100.00
GRADE TEN BOYS			
1	Football	37	15.68
2	Hockey	29	12.29
3	Car Racing	29	12.29
4	Basketball	13	5.51
5	Skiing	11	4.66
6	Tennis	11	4.66
	Others	92	38.98
	No or improper response	14	5.93
	TOTAL	236	100.00
GRADE TWELVE BOYS			
1	Football	44	18.57
2	Hockey	37	15.61
3	Car Racing	35	14.77
4	Skiing	21	8.86
5	Lacrosse	11	4.64
6	Sky Diving	11	4.64
	Others	73	30.80
	No or improper response	5	2.11
	TOTAL	237	100.00

TABLE XLVII (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Tennis	39	15.00
2	Skiing	31	11.92
3	Swimming	27	10.38
4	Equestrian Sports	17	6.54
5	Football	12	4.62
6	Surfing	11	4.23
	Others	118	45.39
	No or improper response	<u>5</u>	<u>1.92</u>
	TOTAL	260	100.00
GRADE TWELVE GIRLS			
1	Skiing	44	16.79
2	Tennis	30	11.45
3	Swimming	30	11.45
4	Car Racing	15	5.73
5	Basketball	12	4.58
6	Equestrian Sports	12	4.58
	Others	117	44.66
	No or improper response	<u>2</u>	<u>0.76</u>
	TOTAL	262	100.00

most. It was closely followed by football (9.95 per cent), tennis (8.64 per cent), car racing (8.44 per cent), hockey (7.74 per cent), and swimming (7.04 per cent). The closeness of the percentages as well as the low values would seem to indicate a wide variety of physical activities this sample would like to participate in the most.

Grade ten boys. For the grade ten boys, football (15.68 per cent), hockey (12.29 per cent), and car racing (12.29 per cent) occupied the top three sports. These were followed by basketball (5.51 per cent), skiing (4.66 per cent), and tennis (4.66 per cent).

Grade twelve boys. Football (18.57 per cent), hockey (15.61 per cent) and car racing (14.77 per cent) also occupied the top three spots, followed by skiing (8.86 per cent) and two relatively new activities, lacrosse (4.64 per cent) and sky diving (4.64 per cent).

Grade ten girls. The grade ten girls indicated that they would like to participate in tennis (15.00 per cent) the most. This was followed by skiing (11.92 per cent), swimming (10.38 per cent), equestrian sports (6.54 per cent), football (4.62 per cent), and surfing (4.23 per cent).

Grade twelve girls. The results for grade twelve girls showed that skiing (16.79 per cent) and tennis (11.45 per cent) exchanged spots. Swimming (11.45 per cent), car racing (5.73 per cent), basketball (4.58 per cent), and equestrian sports (4.58 per cent) followed in that order.

What is Your Favorite Sport to Attend as a Spectator? (Table XLVIII)

Total sample. The results of the total sample showed that football (36.28 per cent) is the most favored sport to attend as a spectator. Hockey (23.12 per cent) occupied the second position, followed by basketball (9.95 per cent), car racing (8.94 per cent), baseball (2.21 per cent), and horse racing (2.21 per cent).

Grade ten boys. Football (35.17 per cent) was the favorite sport attended by grade ten boys. This was followed by hockey (27.12 per cent), car racing (11.44 per cent), basketball (5.51 per cent),

TABLE XLVIII
SPECTATOR SPORT MOST FREQUENTLY ATTENDED

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Football	361	36.28
2	Hockey	230	23.12
3	Basketball	99	9.95
4	Car Racing	89	8.94
5	Baseball	49	4.92
6	Horse Racing	22	2.21
	Others	131	13.17
	No or improper response	<u>14</u>	<u>1.41</u>
	TOTAL	995	100.00
GRADE TEN BOYS			
1	Football	83	35.17
2	Hockey	64	27.12
3	Car Racing	27	11.44
4	Basketball	13	5.51
5	Baseball	5	2.12
6	Diving	5	2.12
	Others	34	14.40
	No or improper response	<u>5</u>	<u>2.12</u>
	TOTAL	236	100.00
GRADE TWELVE BOYS			
1	Football	97	40.93
2	Hockey	78	32.91
3	Car Racing	35	14.77
4	Basketball	11	4.64
5	Baseball	2	0.84
6	Figure Skating	2	0.84
	Others	8	3.38
	No or improper response	<u>4</u>	<u>1.69</u>
	TOTAL	237	100.00

TABLE XLVIII (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Football	91	35.00
2	Hockey	38	14.62
3	Basketball	36	13.85
4	Baseball	23	8.85
5	Car Racing	9	3.46
6	Horse Racing	8	3.08
	Others	51	19.60
	No or improper response	<u>4</u>	<u>1.54</u>
	TOTAL	260	100.00
GRADE TWELVE GIRLS			
1	Football	90	34.35
2	Hockey	50	19.08
3	Basketball	39	14.89
4	Baseball	19	7.25
5	Car Racing	18	6.87
6	Horse Racing	9	3.44
	Others	36	13.74
	No or improper response	<u>1</u>	<u>0.38</u>
	TOTAL	262	100.00

baseball (2.12 per cent) and diving (2.12 per cent).

Grade twelve boys. The top five sports attended by the grade ten boys are also the same top five for the grade twelve boys. They are: football (40.93 per cent), hockey (32.91 per cent), car racing (14.77 per cent), basketball (4.64 per cent), and baseball (0.84 per cent). The sixth spectator sport is figure skating (0.84 per cent).

Grade ten girls. Grade ten girls expressed as their favorite spectator sport the following: football (35.00 per cent), hockey (14.62 per cent), basketball (13.85 per cent), baseball (8.85 per cent),

car racing (3.46 per cent), and horse racing (3.08 per cent).

Grade twelve girls. The sample of grade twelve girls expressed themselves in a manner almost exactly like that of the grade ten girls. The same six sports as selected by the grade twelve girls were those selected by the grade ten girls. They were: football (34.35 per cent), hockey (19.08 per cent), basketball (14.89 per cent), baseball (7.25 per cent), car racing (6.87 per cent), and horse racing (3.44 per cent).

What is Your Father's or Guardian's) Favorite Sport to Attend as a Spectator? (Table XLIX)

Total sample. Hockey (42.71 per cent), and football (27.74 per cent) were the overwhelmingly popular sports that are attended by the father or guardian. They were followed by baseball (4.62 per cent), and soccer (3.72 per cent), car racing (2.01 per cent), and professional wrestling (1.41 per cent).

Grade ten boys. The grade ten boys indicated that hockey (40.25 per cent), and football (26.69 per cent), are the two most favored sports attended by the father or guardian. These are followed by baseball (5.08 per cent), soccer (3.81 per cent), car racing (2.54 per cent), and horse racing (1.27 per cent).

Grade twelve boys. The grade twelve boys indicated that the following six sports are the ones most frequently attended by the father or guardian. They are: hockey (43.04 per cent), football

TABLE XLIX

SPECTATOR SPORT MOST FREQUENTLY ATTENDED BY FATHER OR GUARDIAN

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Hockey	425	42.71
2	Football	276	27.74
3	Baseball	46	4.62
4	Soccer	37	3.72
5	Car Racing	20	2.01
6	Professional Wrestling	14	1.41
	Others	61	6.13
	No or improper response	<u>116</u>	<u>11.66</u>
	TOTAL	995	100.00
GRADE TEN BOYS			
1	Hockey	95	40.25
2	Football	63	26.69
3	Baseball	12	5.08
4	Soccer	9	3.81
5	Car Racing	6	2.54
6	Horse Racing	3	1.27
	Others	15	6.38
	No or improper response	<u>33</u>	<u>13.98</u>
	TOTAL	236	100.00
GRADE TWELVE BOYS			
1	Hockey	102	43.04
2	Football	68	28.69
3	Baseball	7	2.95
4	Professional Wrestling	4	1.69
5	Car Racing	4	1.69
6	Golf	3	1.27
	Others	17	7.17
	No or improper response	<u>32</u>	<u>13.50</u>
	TOTAL	237	100.00

TABLE XLIX (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Hockey	119	45.77
2	Football	71	27.31
3	Baseball	16	6.15
4	Golf	5	1.92
5	Car Racing	4	1.54
6	Horse Racing	3	1.15
	Others	16	6.16
	No or improper response	<u>26</u>	<u>10.00</u>
	TOTAL	260	100.00
GRADE TWELVE GIRLS			
1	Hockey	109	41.60
2	Football	74	28.24
3	Soccer	11	4.20
4	Baseball	11	4.20
5	Professional Wrestling	7	2.67
6	Car Racing	6	2.29
	Others	19	7.26
	No or improper response	<u>25</u>	<u>9.54</u>
	TOTAL	262	100.00

(28.69 per cent), baseball (2.95 per cent), professional wrestling (1.69 per cent), car racing (1.69 per cent), and golf (1.27 per cent).

Grade ten girls. Hockey (45.77 per cent), and football (27.31 per cent), occupied the two top spots for the grade ten girls. They are distantly followed by baseball (6.15 per cent), golf (1.92 per cent), car racing (1.54 per cent), and horse racing (1.15 per cent).

Grade twelve girls. As with the other three subpopulations, hockey (41.60 per cent), and football (28.24 per cent) were the popular choices for the sports most frequently attended by the father or

guardian. Soccer (4.20 per cent), baseball (4.20 per cent), professional wrestling (2.67 per cent), and car racing (2.29 per cent), followed, in that order.

What is Your Favorite Sport on Television? (Table L)

Total sample. The results from the total sample showed hockey (30.95 per cent), and football (23.22 per cent) as the two most favored sports on television. These two are distantly followed by car racing (9.15 per cent), baseball (5.43 per cent), swimming (5.13 per cent) and skiing (4.62 per cent).

Grade ten boys. The grade ten boys indicated that hockey (33.90 per cent), football (23.73 per cent), and car racing (18.22 per cent) were the top three sports on television. They were followed by baseball (5.08 per cent), dancing (2.12 per cent), and professional wrestling (1.69 per cent).

Grade twelve boys. As with the grade ten boys, hockey (46.41 per cent), football (29.96 per cent), and car racing (10.55 per cent) were the three most popular sports on television. Skiing (2.11 per cent), baseball (1.69 per cent), and professional wrestling (1.27 per cent) follow.

Grade ten girls. The grade ten girls indicated that their favorite sports on television are as follows: hockey (21.54 per cent), football (13.46 per cent), swimming (13.46 per cent), skiing (9.23 per cent), baseball (6.92 per cent), and diving (4.23 per cent).

TABLE L

PHYSICAL ACTIVITY MOST FREQUENTLY WATCHED ON TELEVISION

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Hockey	308	30.95
2	Football	231	23.22
3	Car Racing	91	9.15
4	Baseball	54	5.43
5	Swimming	51	5.13
6	Skiing	46	4.62
	Others	169	16.98
	No or improper response	<u>45</u>	<u>4.52</u>
	TOTAL	995	100.00
GRADE TEN BOYS			
1	Hockey	80	33.90
2	Football	56	23.73
3	Car Racing	43	18.22
4	Baseball	12	5.08
5	Dancing	5	2.12
6	Professional Wrestling	4	1.69
	Others	25	10.60
	No or improper response	<u>11</u>	<u>4.66</u>
	TOTAL	236	100.00
GRADE TWELVE BOYS			
1	Hockey	110	46.41
2	Football	71	29.96
3	Car Racing	25	10.55
4	Skiing	5	2.11
5	Baseball	4	1.69
6	Professional Wrestling	3	1.27
	Others	13	5.48
	No or improper response	<u>6</u>	<u>2.53</u>
	TOTAL	237	100.00

TABLE L (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Hockey	56	21.54
2	Football	35	13.46
3	Swimming	35	13.46
4	Skiing	24	9.23
5	Baseball	18	6.92
6	Diving	11	4.23
	Others	63	24.24
	No or improper response	<u>18</u>	<u>6.92</u>
	TOTAL	260	100.00
GRADE TWELVE GIRLS			
1	Football	69	26.34
2	Hockey	62	23.66
3	Baseball	20	7.63
4	Car Racing	15	5.73
5	Swimming	14	5.34
6	Skiing	13	4.96
	Others	59	22.52
	No or improper response	<u>10</u>	<u>3.82</u>
	TOTAL	262	100.00

Grade twelve girls. Football (26.34 per cent) was the sport most frequently watched on television by the grade twelve girls. This was followed by hockey (23.66 per cent), baseball (7.63 per cent), car racing (5.73 per cent), swimming (5.34 per cent) and skiing (4.96 per cent).

What is Your Father's (or Guardian's) Favorite Sport on Television?
(Table LI)

Total sample. The results for the total sample showed that hockey (52.16 per cent) is by far the father's or guardian's most

TABLE LI

PHYSICAL ACTIVITY MOST FREQUENTLY WATCHED ON TELEVISION BY
FATHER OR GUARDIAN

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Hockey	519	52.16
2	Football	197	19.80
3	Baseball	37	3.72
4	Golf	26	2.61
5	Professional Wrestling	26	2.61
6	Car Racing	18	1.81
	Others	58	5.83
	No or improper response	<u>114</u>	<u>11.46</u>
	TOTAL	995	100.00
GRADE TEN BOYS			
1	Hockey	118	50.00
2	Football	44	18.64
3	Baseball	7	2.97
4	Car Racing	6	2.54
5	Golf	4	1.69
6	Curling	3	1.27
	Others	19	8.04
	No or improper response	<u>35</u>	<u>14.83</u>
	TOTAL	236	100.00
GRADE TWELVE BOYS			
1	Hockey	128	54.01
2	Football	54	22.78
3	Baseball	6	2.53
4	Professional Wrestling	6	2.53
5	Golf	4	1.69
6	Car Racing	3	1.27
	Others	8	3.38
	No or improper response	<u>28</u>	<u>11.81</u>
	TOTAL	237	100.00

TABLE LI (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Hockey	138	53.08
2	Football	47	18.08
3	Baseball	14	5.38
4	Golf	12	4.62
5	Car Racing	5	1.92
6	Professional Wrestling	5	1.92
	Others	11	4.23
	No or improper response	<u>28</u>	<u>10.77</u>
	TOTAL	260	100.00
GRADE TWELVE GIRLS			
1	Hockey	135	51.53
2	Football	52	19.85
3	Professional Wrestling	13	4.96
4	Baseball	10	3.82
5	Golf	6	2.29
6	Skiing	4	1.53
	Others	19	7.24
	No or improper response	<u>23</u>	<u>8.78</u>
	TOTAL	262	100.00

popular sport on television; 19.80 per cent watch football, while 3.72 per cent watch baseball, 2.61 per cent watch golf, 2.61 per cent watch professional wrestling and 1.81 per cent watch car racing.

Grade ten boys. The grade ten boys indicated that hockey (50.00 per cent) was the father's or guardian's most popular sport on television. This was followed by football (18.64 per cent), baseball (2.97 per cent), car racing (2.54 per cent), golf (1.69 per cent), and curling (1.27 per cent).

Grade twelve boys. Hockey (54.01 per cent) was, by far, the father's or guardian's most favored sport on television as indicated by the sample of grade twelve boys. This was followed by football (22.78 per cent), baseball (2.53 per cent), professional wrestling (2.53 per cent), golf (1.69 per cent), and car racing (1.27 per cent).

Grade ten girls. Grade ten girls indicated that hockey (53.08 per cent) was the father's or guardian's favorite sport on television. Football (18.08 per cent), baseball (5.38 per cent), golf (4.62 per cent), car racing (1.92 per cent), and professional wrestling (1.92 per cent) followed in that order.

Grade twelve girls. Hockey (51.53 per cent), as with the other subpopulations, was, by far, the father's or guardian's favorite sport on television. This was followed by football (19.85 per cent), professional wrestling (4.96 per cent), baseball (3.82 per cent), golf (2.29 per cent) and skiing (1.53 per cent).

CLASSIFICATION OF SPORTS AND PHYSICAL ACTIVITIES

What Two Sports or Physical Activities Do You Think Are Best For Providing Enjoyable Social Experiences? (Table LII)

Total sample. The results for the total sample indicated that the following six activities are best for providing social experiences: dancing (24.42 per cent), swimming (10.70 per cent), tennis (7.84 per cent), football (4.67 per cent), baseball (4.67 per cent), and basketball (4.17 per cent).

TABLE LII
PHYSICAL ACTIVITIES PROVIDING SOCIAL EXPERIENCES

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Dancing	486	24.42
2	Swimming	213	10.70
3	Tennis	156	7.84
4	Football	93	4.67
5	Baseball	93	4.67
6	Basketball	83	4.17
	Others	627	31.52
	No or improper response	<u>239</u>	<u>12.01</u>
	TOTAL	1990	100.00
GRADE TEN BOYS			
1	Dancing	103	21.82
2	Swimming	46	9.75
3	Football	31	6.57
4	Hockey	30	6.36
5	Tennis	28	5.93
6	Baseball	17	3.60
	Others	132	27.96
	No or improper response	<u>85</u>	<u>18.01</u>
	TOTAL	472	100.00
GRADE TWELVE BOYS			
1	Dancing	114	24.05
2	Swimming	38	8.02
3	Football	36	7.59
4	Tennis	35	7.38
5	Golf	24	5.06
6	Bowling	24	5.06
	Others	143	30.18
	No or improper response	<u>60</u>	<u>12.66</u>
	TOTAL	474	100.00

TABLE LII (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Dancing	117	22.50
2	Swimming	64	12.31
3	Tennis	44	8.46
4	Baseball	39	7.50
5	Basketball	26	5.00
6	Skiing	22	4.23
	Others	156	30.00
	No or improper response	<u>52</u>	<u>10.00</u>
	TOTAL	520	100.00
GRADE TWELVE GIRLS			
1	Dancing	152	29.01
2	Swimming	65	12.40
3	Tennis	49	9.35
4	Skiing	27	5.15
5	Basketball	25	4.77
6	Baseball	24	4.58
	Others	140	26.72
	No or improper response	<u>42</u>	<u>8.02</u>
	TOTAL	524	100.00

Grade ten boys. The grade ten boys felt that the following six activities are best for providing social experiences: dancing (21.82 per cent), swimming (9.75 per cent), football (6.57 per cent), hockey (6.36 per cent), tennis (5.93 per cent), and baseball (3.60 per cent).

Grade twelve boys. The grade twelve boys felt that the following six sports or physical activities are best for providing social experiences: dancing (24.05 per cent), swimming (8.02 per cent), football (7.59 per cent), tennis (7.38 per cent), golf (5.06 per cent), and bowling (5.06 per cent).

Grade ten girls. The grade ten girls felt that the following six sports or physical activities are best for providing enjoyable social experiences: dancing (22.50 per cent), swimming (12.31 per cent), tennis (8.46 per cent), baseball (7.50 per cent), basketball (5.00 per cent), and skiing (4.23 per cent).

Grade twelve girls. The grade twelve girls felt that the following six sports or physical activities are best for providing enjoyable social experiences: dancing (29.01 per cent), swimming (12.40 per cent), tennis (9.35 per cent), skiing (5.15 per cent), basketball (4.77 per cent), and baseball (4.58 per cent).

What Two Physical Activities Do You Think Are Best For Developing Health and Fitness? (Table LIII)

Total sample. The results for the total sample indicated that the following six activities are best for developing health and fitness: swimming (15.68 per cent), track and field (14.37 per cent), gymnastics (9.65 per cent), conditioning exercises (7.14 per cent), football (7.04 per cent) and weight lifting (5.08 per cent).

Grade ten boys. The grade ten boys felt that the following six activities are best for developing health and fitness: track and field (19.07 per cent), gymnastics (11.44 per cent), football (10.38 per cent), swimming (9.11 per cent), weight lifting (8.05 per cent), and hockey (6.78 per cent).

Grade twelve boys. The grade twelve boys felt that the following

TABLE LIII
PHYSICAL ACTIVITIES FOR HEALTH AND FITNESS

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Swimming	312	15.68
2	Track and Field	286	14.37
3	Gymnastics	192	9.65
4	Conditioning Exercises	142	7.14
5	Football	140	7.04
6	Weight Lifting	101	5.08
	Others	587	29.48
	No or improper response	<u>230</u>	<u>11.56</u>
	TOTAL	1990	100.00
GRADE TEN BOYS			
1	Track and Field	90	19.07
2	Gymnastics	54	11.44
3	Football	49	10.38
4	Swimming	43	9.11
5	Weight Lifting	38	8.05
6	Hockey	32	6.78
	Others	88	18.64
	No or improper response	<u>78</u>	<u>16.53</u>
	TOTAL	472	100.00
GRADE TWELVE BOYS			
1	Track and Field	75	15.82
2	Football	65	13.71
3	Swimming	55	11.60
4	Weight Lifting	53	11.18
5	Hockey	49	10.34
6	Gymnastics	36	7.59
	Others	100	21.11
	No or improper response	<u>41</u>	<u>8.65</u>
	TOTAL	474	100.00

TABLE LIII (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Swimming	106	20.38
2	Track and Field	76	14.62
3	Gymnastics	47	9.04
4	Weight Lifting	42	8.08
5	Basketball	29	5.58
6	Tennis	25	4.81
	Others	134	25.76
	No or improper response	<u>61</u>	<u>11.73</u>
	TOTAL	520	100.00
GRADE TWELVE GIRLS			
1	Swimming	108	20.61
2	Gymnastics	55	10.50
3	Conditioning Exercises	52	9.92
4	Tennis	47	8.97
5	Track and Field	45	8.59
6	Basketball	28	5.34
	Others	139	26.53
	No or improper response	<u>50</u>	<u>9.54</u>
	TOTAL	524	100.00

six activities are best for developing health and fitness: track and field (15.82 per cent), football (13.71 per cent), swimming (11.60 per cent), weight lifting (11.18 per cent), hockey (10.34 per cent) and gymnastics (7.59 per cent).

Grade ten girls. The grade ten girls felt that the following six activities are best for developing health and fitness: swimming (20.38 per cent), track and field (14.62 per cent), gymnastics (9.04 per cent), weight lifting (8.08 per cent), basketball (5.58 per cent), and tennis (4.81 per cent).

Grade twelve girls. The grade twelve girls felt that the following six activities are best for developing health and fitness: swimming (20.61 per cent), gymnastics (10.50 per cent), conditioning exercises (9.92 per cent), tennis (8.97 per cent), track and field (8.59 per cent), and basketball (5.34 per cent).

What Two Physical Activities are Best For Providing Thrills at Some Risk? (Table LIV)

Total sample. The results for the total sample indicated that the following six activities are best for providing thrills at some risk: car racing (27.54 per cent), skiing (9.85 per cent), football (7.39 per cent), hockey (6.83 per cent), sky diving (4.72 per cent) and diving (2.31 per cent).

Grade ten boys. The grade ten boys felt that the following six physical activities are best for providing thrills at some risk: car racing (23.31 per cent), hockey (10.38 per cent), football (8.90 per cent), skiing (4.66 per cent), gymnastics (3.18 per cent), and sky diving (3.17 per cent).

Grade twelve boys. The grade twelve boys felt that the following six physical activities are best for providing thrills at some risk: car racing (31.22 per cent), football (11.60 per cent), skiing (10.34 per cent), hockey (9.49 per cent), sky diving (5.49 per cent), and diving (2.32 per cent).

Grade ten girls. The grade ten girls felt that the following

TABLE LIV

PHYSICAL ACTIVITIES AS THE PURSUIT OF VERTIGO

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Car Racing	548	27.54
2	Skiing	197	9.85
3	Football	147	7.39
4	Hockey	136	6.83
5	Sky Diving	94	4.72
6	Diving	46	2.31
	Others	483	24.27
	No or improper response	<u>340</u>	<u>17.09</u>
	TOTAL	1990	100.00
GRADE TEN BOYS			
1	Car Racing	110	23.31
2	Hockey	49	10.38
3	Football	42	8.90
4	Skiing	22	4.66
5	Gymnastics	15	3.18
6	Sky Diving	15	3.17
	Others	118	25.00
	No or improper response	<u>101</u>	<u>21.40</u>
	TOTAL	472	100.00
GRADE TWELVE BOYS			
1	Car Racing	148	31.22
2	Football	55	11.60
3	Skiing	49	10.34
4	Hockey	45	9.49
5	Sky Diving	26	5.49
6	Diving	11	2.32
	Others	81	17.11
	No or improper response	<u>59</u>	<u>12.45</u>
	TOTAL	474	100.00

TABLE LIV (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Car Racing	124	23.85
2	Skiing	64	12.30
3	Football	30	5.77
4	Sky Diving	24	4.62
5	Equestrian Sports	24	4.62
6	Track and Field	19	3.65
	Others	143	27.50
	No or improper response	<u>92</u>	<u>17.69</u>
	TOTAL	520	100.00
GRADE TWELVE GIRLS			
1	Car Racing	166	31.68
2	Skiing	61	11.64
3	Sky Diving	29	5.53
4	Hockey	26	4.96
5	Football	20	3.82
6	Equestrian Sports	16	3.05
	Others	118	22.53
	No or improper response	<u>88</u>	<u>16.79</u>
	TOTAL	524	100.00

six physical activities are best for providing thrills at some risk: car racing (23.85 per cent), skiing (12.30 per cent), football (5.77 per cent), sky diving (4.62 per cent), equestrian sports (4.62 per cent), and track and field (3.65 per cent).

Grade twelve girls. The grade twelve girls felt that the following six physical activities are best for providing thrills at some risk: car racing (31.68 per cent), skiing (11.64 per cent), sky diving (5.53 per cent), hockey (4.96 per cent), football (3.82 per cent), and equestrian sports (3.05 per cent).

What Two Physical Activities Do You Think Are Best For Showing the Beauty of Human Movement? (Table LV)

Total sample. The results for the total sample indicated that the following six physical activities are best for showing the beauty of human movement: ballet (28.64 per cent), gymnastics (15.33 per cent), figure skating (14.77 per cent), swimming (8.64 per cent), diving (5.48 per cent) and track and field (1.91 per cent).

Grade ten boys. The grade ten boys felt that the following six physical activities are best for showing the beauty of human movement: gymnastics (19.49 per cent), ballet (19.07 per cent), figure skating (12.71 per cent), swimming (7.84 per cent), diving (5.08 per cent), and track and field (3.18 per cent).

Grade twelve boys. The grade twelve boys felt that the following six physical activities are best for showing the beauty of human movement: ballet (22.57 per cent), gymnastics (17.72 per cent), figure skating (12.66 per cent), swimming (8.86 per cent), diving (7.59 per cent) and track and field (2.53 per cent).

Grade ten girls. The grade ten girls felt that the following six physical activities are best for showing the beauty of human movement: ballet (33.46 per cent), figure skating (15.19 per cent), gymnastics (12.12 per cent), swimming (9.42 per cent), diving (4.23 per cent), and skiing (1.92 per cent).

Grade twelve girls. The grade twelve girls felt that the

TABLE LV
PHYSICAL ACTIVITIES AS AN AESTHETIC EXPERIENCE

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Ballet	570	28.64
2	Gymnastics	305	15.33
3	Figure Skating	294	14.77
4	Swimming	172	8.64
5	Diving	109	5.48
6	Track and Field	38	1.91
	Others	177	8.90
	No or improper response	<u>325</u>	<u>16.33</u>
	TOTAL	1990	100.00
GRADE TEN BOYS			
1	Gymnastics	92	19.49
2	Ballet	90	19.07
3	Figure Skating	60	12.71
4	Swimming	37	7.84
5	Diving	24	5.08
6	Track and Field	15	3.18
	Others	52	11.02
	No or improper response	<u>102</u>	<u>21.61</u>
	TOTAL	472	100.00
GRADE TWELVE BOYS			
1	Ballet	107	22.57
2	Gymnastics	84	17.72
3	Figure Skating	60	12.66
4	Swimming	42	8.86
5	Diving	36	7.59
6	Track and Field	12	2.53
	Others	48	10.14
	No or improper response	<u>85</u>	<u>17.93</u>
	TOTAL	474	100.00

TABLE LV (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Ballet	174	33.46
2	Figure Skating	79	15.19
3	Gymnastics	63	12.12
4	Swimming	49	9.42
5	Diving	22	4.23
6	Skiing	10	1.92
	Others	51	9.81
	No or improper response	<u>72</u>	<u>13.85</u>
	TOTAL	520	100.00
GRADE TWELVE GIRLS			
1	Ballet	199	37.98
2	Figure Skating	95	18.13
3	Gymnastics	66	12.60
4	Swimming	44	8.40
5	Diving	27	5.15
6	Skiing	6	1.14
	Others	21	4.00
	No or improper response	<u>66</u>	<u>12.60</u>
	TOTAL	524	100.00

following six physical activities are best for showing the beauty of human movement: ballet (37.98 per cent), figure skating (18.13 per cent), gymnastics (12.60 per cent), swimming (8.40 per cent), diving (5.15 per cent), and skiing (1.14 per cent).

What Two Physical Activities Do You Think Are Best For Releasing Tension? (Table LVI)

Total sample. The results for the total sample indicated that

TABLE LVI
PHYSICAL ACTIVITIES FOR CATHARSIS

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Swimming	183	9.20
2	Football	159	8.49
3	Tennis	128	6.43
4	Hockey	108	5.43
5	Track and Field	102	5.13
6	Baseball	101	5.08
	Others	822	41.30
	No or improper response	<u>377</u>	<u>18.94</u>
	TOTAL	1990	100.00
GRADE TEN BOYS			
1	Football	47	9.96
2	Swimming	41	8.69
3	Hockey	36	7.63
4	Boxing	26	5.51
5	Track and Field	24	5.08
6	Basketball	19	4.03
	Others	167	35.37
	No or improper response	<u>112</u>	<u>23.73</u>
	TOTAL	472	100.00
GRADE TWELVE BOYS			
1	Football	63	13.29
2	Hockey	42	8.86
3	Boxing	41	8.65
4	Swimming	25	5.27
5	Tennis	23	4.85
6	Wrestling	22	4.64
	Others	168	35.45
	No or improper response	<u>90</u>	<u>18.99</u>
	TOTAL	474	100.00

TABLE LVI (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Swimming	68	13.08
2	Tennis	39	7.50
3	Baseball	38	7.31
4	Track and Field	35	6.73
5	Dancing	34	6.54
6	Basketball	22	4.23
	Others	185	35.57
	No or improper response	<u>99</u>	<u>19.04</u>
	TOTAL	520	100.00
GRADE TWELVE GIRLS			
1	Swimming	49	9.35
2	Tennis	47	8.97
3	Football	38	7.25
4	Dancing	36	6.87
5	Baseball	33	6.30
6	Track and Field	25	4.77
	Others	220	41.99
	No or improper response	<u>76</u>	<u>14.50</u>
	TOTAL	524	100.00

the following six physical activities are best for releasing tension: swimming (9.20 per cent), football (8.49 per cent), tennis (6.43 per cent), hockey (5.43 per cent), track and field (5.13 per cent), and baseball (5.08 per cent).

Grade ten boys. The grade ten boys felt that the following six physical activities are best for releasing tension: football (9.96 per cent), swimming (8.69 per cent), hockey (7.63 per cent), boxing (5.51 per cent), track and field (5.08 per cent), and basketball (4.03 per cent).

Grade twelve boys. The grade twelve boys felt that the following six physical activities are best for releasing tension: football (13.29 per cent), hockey (8.86 per cent), boxing (8.65 per cent), swimming (5.27 per cent), tennis (4.85 per cent), and wrestling (4.64 per cent).

Grade ten girls. The grade ten girls felt that the following six physical activities are best for releasing tension: swimming (13.08 per cent), tennis (7.50 per cent), baseball (7.31 per cent), track and field (6.73 per cent), dancing (6.54 per cent), and basketball (4.23 per cent).

Grade twelve girls. The grade twelve girls felt that the following six physical activities are best for releasing tension: swimming (9.35 per cent), tennis (8.97 per cent), football (7.25 per cent), dancing (6.87 per cent), baseball (6.30 per cent), and track and field (4.77 per cent).

What Two Physical Activities Do You Think Require the Most Prolonged and Strenuous Training? (Table LVII)

Total sample. The results for the total sample indicated that the following six physical activities require the most prolonged and strenuous training: track and field (25.53 per cent), football (11.91 per cent), swimming (6.98 per cent), hockey (6.48 per cent), gymnastics (5.98 per cent), and boxing (3.77 per cent).

Grade ten boys. The grade ten boys felt that the following six

TABLE LVII
PHYSICAL ACTIVITIES AS AN ASCETIC EXPERIENCE

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Track and Field	508	25.53
2	Football	237	11.91
3	Swimming	139	6.98
4	Hockey	129	6.48
5	Gymnastics	119	5.98
6	Boxing	75	3.77
	Others	421	21.16
	No or improper response	<u>362</u>	<u>18.19</u>
	TOTAL	1990	100.00
GRADE TEN BOYS			
1	Track and Field	118	25.00
2	Football	56	11.86
3	Gymnastics	35	7.42
4	Hockey	31	6.57
5	Weight Training	22	4.66
6	Boxing	21	4.45
	Others	83	17.58
	No or improper response	<u>106</u>	<u>22.46</u>
	TOTAL	472	100.00
GRADE TWELVE BOYS			
1	Track and Field	107	22.57
2	Football	82	17.30
3	Hockey	39	8.23
4	Swimming	36	7.59
5	Weight Training	35	7.38
6	Boxing	23	4.85
	Others	68	14.36
	No or improper response	84	17.72

TABLE LVII (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Track and Field	161	30.96
2	Football	41	7.88
3	Swimming	34	6.54
4	Gymnastics	32	6.15
5	Ballet	26	5.00
6	Hockey	22	4.23
	Others	99	19.05
	No or improper response	<u>105</u>	<u>20.19</u>
	TOTAL	520	100.00
GRADE TWELVE GIRLS			
1	Track and Field	122	23.28
2	Football	58	11.07
3	Swimming	50	9.54
4	Hockey	37	7.06
5	Gymnastics	33	6.30
6	Ballet	31	5.92
	Others	126	24.04
	No or improper response	<u>67</u>	<u>12.79</u>
	TOTAL	524	100.00

physical activities require the most prolonged and strenuous training: track and field (25.00 per cent), football (11.86 per cent), gymnastics (7.42 per cent), hockey (6.57 per cent), weight training (4.66 per cent), and boxing (4.45 per cent).

Grade twelve boys. The grade twelve boys felt that the following six physical activities require the most prolonged and strenuous training: track and field (22.57 per cent), football (17.30 per cent), hockey (8.23 per cent), swimming (7.59 per cent), weight training (7.38

per cent), and boxing (4.85 per cent).

Grade ten girls. The grade ten girls felt that the following six physical activities required the most prolonged and strenuous training: track and field (30.96 per cent), football (7.88 per cent), swimming (6.54 per cent), gymnastics (6.15 per cent), ballet (5.00 per cent), and hockey (4.23 per cent).

Grade twelve girls. The grade twelve girls felt that the following six physical activities required the most prolonged and strenuous training: track and field (23.28 per cent), football (11.07 per cent), swimming (9.54 per cent), hockey (7.06 per cent), gymnastics (6.30 per cent), and ballet (5.92 per cent).

What Two Sports or Physical Activities Do You Think Are Based Mostly on Chance or Luck? (Table LVIII)

Total sample. The results for the total sample indicated that the following six physical activities are based mostly on chance or luck: horse racing (26.78 per cent), card games (26.58 per cent), car racing (4.37 per cent), billiards (1.61 per cent), baseball (1.31 per cent), and hockey (1.21 per cent).

Grade ten boys. The grade ten boys felt that the following six physical activities are based mostly on chance or luck: card games (27.54 per cent), horse racing (23.31 per cent), car racing (2.97 per cent), billiards (1.91 per cent), hockey (1.27 per cent), and golf (0.85 per cent).

TABLE LVIII
PHYSICAL ACTIVITIES AS GAMES OF CHANCE

Rank	Physical Activity	Number of Responses	Percentage of Total
TOTAL SAMPLE			
1	Horse Racing	533	26.78
2	Card Games	529	26.58
3	Car Racing	87	4.37
4	Billiards or Pool	32	1.61
5	Baseball	26	1.31
6	Hockey	24	1.21
	Others	207	10.40
	No or improper response	<u>552</u>	<u>27.74</u>
	TOTAL	1990	100.00
GRADE TEN BOYS			
1	Card Games	130	27.54
2	Horse Racing	110	23.31
3	Car Racing	14	2.97
4	Billiards	9	1.91
5	Hockey	6	1.27
6	Golf	4	0.85
	Others	40	8.46
	No or improper response	<u>159</u>	<u>33.69</u>
	TOTAL	472	100.00
GRADE TWELVE BOYS			
1	Card Games	150	31.65
2	Horse Racing	117	24.68
3	Car Racing	16	3.38
4	Billiards	12	2.53
5	Golf	8	1.69
6	Hunting & Fishing	6	1.27
	Others	32	6.74
	No or improper response	<u>133</u>	<u>28.06</u>
	TOTAL	474	100.00

TABLE LVIII (Continued)

Rank	Physical Activity	Number of Responses	Percentage of Total
GRADE TEN GIRLS			
1	Horse Racing	140	26.92
2	Card Games	104	20.00
3	Car Racing	28	5.38
4	Basketball	14	2.69
5	Baseball	12	2.31
6	Hockey	11	2.12
	Others	69	13.27
	No or improper response	<u>142</u>	<u>27.31</u>
	TOTALS	<u>520</u>	<u>100.00</u>
GRADE TWELVE GIRLS			
1	Horse Racing	166	31.68
2	Card Games	145	27.67
3	Car Racing	29	5.53
4	Billiards	8	1.53
5	Golf	7	1.34
6	Baseball	6	1.15
	Others	45	8.58
	No or improper response	<u>118</u>	<u>22.52</u>
	TOTAL	<u>524</u>	<u>100.00</u>

Grade twelve boys. The grade twelve boys felt that the following six physical activities are based mostly on chance or luck: card games (31.65 per cent), horse racing (24.68 per cent), car racing (3.38 per cent), billiards (2.53 per cent), golf (1.69 per cent), and hunting and fishing (1.27 per cent).

Grade ten girls. The grade ten girls felt that the following six physical activities are based mostly on chance or luck: horse racing (26.92 per cent), card games (20.00 per cent), car racing (5.38

per cent), basketball (2.69 per cent), baseball (2.31 per cent), and hockey (2.12 per cent).

Grade twelve girls. The grade twelve girls felt that the following six physical activities are based mostly on chance or luck: horse racing (31.68 per cent), card games (27.67 per cent), car racing (5.53 per cent), billiards (1.53 per cent), golf (1.34 per cent), and baseball (1.15 per cent).

AGE, WATCHING TELEVISION, WATCHING SPORTS ON TELEVISION, AND

AND SOCIAL AND PSYCHOLOGICAL VARIABLES

Age (Table LIX)

The average age of the grade ten boys in the sample was 193.93 months or 16.16 years, while the age of the grade ten girls was 191.62 months or 15.97 years. The average age of the grade twelve boys was 218.63 months or 18.22 years as compared to 215.20 months or 17.93 years for the grade twelve girls.

TABLE LIX
MEAN AGES OF THE SAMPLE IN MONTHS AND YEARS

Group	Number	Age in Months	Age in Years
Grade Ten Boys	236	193.949	16.16
Grade Ten Girls	260	191.623	15.97
Grade Twelve Boys	237	218.633	18.22
Grade Twelve Girls	262	215.202	17.93
TOTAL	995	204.817	17.07

Hours Spent Watching Television

In summer. (Tables LX and LXI) The average number of hours spent watching television in summer for the total sample was 10.72 hours per week. The grade ten boys watched television an average of 13.25 hours per week; the grade ten girls watched television an average of 11.13 hours per week; the grade twelve boys watched television an average of 9.95 hours per week; and the grade twelve girls watched television an average of 8.74 hours per week. Using an analysis of variance (Table LX), it was found that the four means were significantly different at the .01 level. Duncan's new multiple range test with Kramer's modification for unequal N's show that all four means, when compared with each other, differed significantly at the .01 level for grade ten boys versus grade twelve boys, grade ten boys versus grade twelve girls and grade ten girls versus grade twelve boys.

In winter. (Tables LX and LXI) The average number of hours spent watching television in the winter for the total sample was 15.09 hours per week. The grade ten boys watched television an average of 19.12 hours per week; the grade twelve boys watched television an average of 15.55 hours per week; the grade ten girls watched television an average of 14.05 hours per week; and the grade twelve girls watched television an average of 12.08 hours per week. When an F-test (Table LX) was carried out, it was found that the four means differed significantly at the .01 level. Duncan's new multiple range test with Kramer's modification for unequal N's showed that the four means, when

TABLE LX

ANALYSES OF VARIANCE AND DUNCAN'S NEW MULTIPLE RANGE TEST WITH
 KRAMER'S MODIFICATION FOR UNEQUAL N'S FOR THE TELEVISION
 MEANS AND THE SCORE MEANS FOR THE NEED FOR APPROVAL,
 SELF-ESTEEM, AND RELATIONSHIP WITH FATHER SCALES

	TV Summer	TV Winter	TV Sports Summer	TV Sports Winter	Need for Approval	Self-Esteem	Relationship with Father
F Test	12.16	23.14	10.96	15.62	10.36	12.92	3.00
	x	x	x	x	x	x	NS
Grade 10 Boys							
vs	NS	x	x	x	x	NS	NS
Grade 10 Girls							
Grade 10 Boys							
vs	x	x	NS	NS	NS	NS	NS
Grade 12 Boys							
Grade 10 Boys							
vs	x	x	x	x	x	NS	NS
Grade 12 Girls							
Grade 10 Girls							
vs	x	NS	NS	x	NS	x	NS
Grade 12 Boys							
Grade 10 Girls							
vs	NS	NS	NS	NS	NS	x	NS
Grade 12 Girls							
Grade 12 Boys							
vs	NS	x	NS	x	NS	NS	NS
Grade 12 Girls							

NS - Not significant; x - significant at the .01 level.

TABLE LXI

MEANS, IN HOURS, FOR WATCHING TELEVISION AND WATCHING SPORTS ON TELEVISION IN THE SUMMER AND WINTER

	Number	Television		Television Sports	
		Summer	Winter	Summer	Winter
Grade 10 Boys	236	13.246	19.123	3.589	5.364
Grade 10 Girls	260	11.135	14.046	2.388	3.281
Grade 12 Boys	237	9.949	15.553	3.274	4.840
Grade 12 Girls	262	8.737	12.080	2.206	3.248
TOTALS	995	10.722	15.091	2.836	4.138

compared with each other, were significantly different at the .01 level for grade ten boys versus grade ten girls, grade ten boys versus grade twelve boys, grade ten boys versus grade twelve girls and grade twelve boys versus grade twelve girls.

Hours Spent Watching Sports on Television

In summer. (Tables LX and LXI) The average number of hours spent watching sports on television in the summer for the total sample was 2.84 hours per week. The grade ten boys watched sports on television an average of 3.59 hours per week; the grade twelve boys watched sports on television an average of 3.27 hours per week; the grade ten girls watched sports an average of 2.39 hours per week; and the grade twelve girls watched sports on television an average of 2.21 hours per week.

An analysis of variance (Table LX) on the four means showed that they differed significantly at the .01 level. Duncan's new multiple range test with Kramer's modification for unequal N's showed that grade ten boys versus grade twelve girls, and grade ten boys versus grade ten

girls, were significantly different at the .01 level.

In winter. (Tables LX and LXI) The average number of hours spent watching sports on television in the winter for the total sample was 4.138 hours per week. The grade ten boys watched sports on television an average of 5.36 hours per week; the grade twelve boys watched sports an average of 4.84 hours per week; the grade ten girls watched sports on television an average of 3.28 hours per week; and the grade twelve girls watched sports on television an average of 3.25 hours per week. An analysis of variance (Table LX) on the four means showed that they differed significantly at the .01 level. Duncan's new multiple range test with Kramer's modification for unequal N's showed that grade ten boys versus grade twelve girls, grade twelve boys versus grade twelve girls, grade ten boys versus grade ten girls, and grade twelve boys versus grade ten girls were significantly different at the .01 level.

Social and Psychological Variables

Need for approval scores. (Tables LX and LXII) The average raw score for need for approval scale for the total sample was 15.19. The grade twelve girls had the highest raw score mean--16.02. They were followed by the grade ten girls (15.65), grade twelve boys (15.23), and grade ten boys (13.70). An analysis of variance shows that all four means differed significantly at the .01 level. Duncan's new multiple range test with Kramer's modification for unequal N's, showed that the four means, when compared with each other, differed significantly at the .01 level for grade ten boys versus grade ten girls and grade ten boys versus grade twelve girls.

TABLE LXII
MEANS OF THE RAW SCORES FOR THE NEED FOR APPROVAL SCALE

Classification	Number	Number of Responses	\bar{X}
Grade 10 Boys	236	232	13.70
Grade 10 Girls	260	257	15.65
Grade 12 Boys	237	234	15.23
Grade 12 Girls	262	262	16.02
TOTAL	995	985	15.19

Self-esteem scores. (Tables LX and LXIII) The average number of positive scales for the self-esteem scale for the total sample was 2.51.

TABLE LXIII
MEANS FOR THE NUMBER OF POSITIVE SCALES FOR THE SELF-ESTEEM SCORES

Classification	Number	Number of Responses	\bar{X}
Grade 10 Boys	236	225	2.44
Grade 10 Girls	260	251	2.93
Grade 12 Boys	237	228	2.17
Grade 12 Girls	262	257	2.46
TOTAL	995	961	2.51

The grade ten girls had the highest positive score mean--2.93. This subpopulation was closely followed by the grade twelve girls (2.46),

grade ten boys (2.44), and grade twelve boys (2.17). An analysis of variance of the four means showed a significant difference at the .01 level. Duncan's new multiple range test with Kramer's modification for unequal N's showed that grade ten girls versus grade twelve girls, and grade twelve boys versus grade ten girls were significantly different at the .01 level.

Relationship with father scores. (Tables LX and LXIV) The average number of positive scales for the relationship with father scale for the total sample was 3.14. The grade ten girls had the

TABLE LXIV

MEANS FOR THE NUMBER OF POSITIVE SCALES FOR ROSENBERG'S RELATIONSHIP WITH FATHER SCORES

Classification	Number	Number of Responses	\bar{X}
Grade 10 Boys	236	220	2.93
Grade 10 Girls	260	249	3.30
Grade 12 Boys	237	224	3.06
Grade 12 Girls	262	254	3.23
TOTAL	995	937	3.14

highest positive scale mean--3.30. This subpopulation is closely followed by grade twelve girls (3.23), grade twelve boys (3.06), and grade ten boys (2.93). An analysis of variance indicated there was no significant difference among the means.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The purpose of the study was to determine current attitudes toward and interests in physical activity of secondary school students in Edmonton; and to seek an explanation for the attitudes and interests thus determined.

Nine hundred and ninety-five secondary students, randomly selected from six Edmonton high schools, served as subjects for the study. Of this total, there were 236 grade ten boys, 261 grade ten girls, 237 grade twelve boys and 262 grade twelve girls. The subjects responded to three inventories, developed by Kenyon, which were designed to obtain information concerning their attitudes toward and interests in physical activity. The inventories required approximately forty-five minutes to complete. All subjects were tested within a two-week period.

All attitude and body image scores were ranked and subjected to an analysis of variance and Duncan's new multiple range test to determine significant differences within as well as between the four subpopulations. General information data pertaining to interests were presented in the form of tables which described the number of responses and their percentages for each of the four subpopulations and the total sample. Chi-square analyses were applied to the general information

data. The responses to questions concerning physical activities and sports were presented in table form showing the rank, frequency, and percentage. The television, social and psychological variables were subjected to an analysis of variance and Duncan's new multiple range test.

A summary of the results is as follows:

The average age of the grade ten boys in the sample was 193.95 months or 16.16 years, while the age of the grade ten girls was 191.62 months or 15.97 years. The average age of the grade twelve boys was 218.63 months or 18.22 years as compared to 215.20 months or 17.93 years for the grade twelve girls.

The four subpopulations expressed favorable attitudes toward physical activity as a social experience, aesthetic experience, as a means for catharsis and for health and fitness. Less favorable attitudes were expressed toward physical activity as the pursuit of vertigo, as an ascetic experience, and as games of chance. The girls' choice of aesthetic was significantly higher than the boys'. The grade ten students expressed a significantly less favorable attitude toward physical activity as an ascetic experience than the grade twelve students.

The ideal evaluative body image scores were consistently high among the four subpopulations. However, the perceived evaluative body image scores varied somewhat. In this respect, grade twelve girls ranked the highest, while grade ten boys ranked the lowest.

The Allport-Vernon Personal Values and Interests Scale indicated

that the boys were interested in that which is practical and useful, and that which involves other people. The girls expressed favorable interest in that which is beautiful, that which involves other people, and in religious matters. Both boys and girls expressed some interest in theoretical matters and in politics.

Both boys and girls indicated that they most frequently participated in physical activity for social experiences, for health and fitness and for release of tension. Participation for beauty in human movement, prolonged and strenuous training and for games of chance were less frequently taken part in. The boys often participate in physical activity for a thrill but involving some risk whereas the girls do not--especially the grade twelves. Best friends' participation in physical activity showed similar results.

The boys, especially the grade tens, watch television and sports on television more often than the girls. It was found that more hours were spent watching television in the winter months, as compared to summer.

Teen dance programs were popular, especially among the grade ten boys and girls. Programs showing dangerous and thrilling sports, and college or professional sport were more frequently viewed by the boys than the girls. Both the grade ten and twelve girls indicated that they often watched programs showing the beauty in human movement. Exercise and physical fitness programs appeared to be unpopular.

Reading about sports and physical activity in newspapers, books and magazines appeared to be an effective medium for relating information.

In this respect, boys read about sports in these various media more often than girls.

More than half of the total sample pointed out that they belonged to at least one club sponsoring sports or physical activity.

The sports and physical activites most frequently participated in were as follows:

Boys: football, hockey, swimming, baseball, basketball and dancing.

Girls: dancing, swimming, skiing, equestrian sports, tennis, and basketball.

Father

or golf, baseball, hockey, swimming, hunting and fishing, and curling.
Guardian:
ing.

The sports and physical activities that the individual would like to participate in the most were as follows:

Boys: football, hockey, car racing, skiing, tennis and lacrosse.

Girls: skiing, tennis, swimming, equestrian sports, car racing and basketball.

The most popular spectator sports were:

Boys: football, hockey, car racing, basketball, baseball, and diving.

Girls: football, hockey, basketball, baseball, car racing, and horse racing.

Father: hockey, football, baseball, soccer, car racing and professional
or
Guardian: wrestling.

The sports most frequently watched on television were:

Boys: hockey, football, car racing, baseball, professional wrestling and skiing.

Girls: hockey, football, swimming, skiing, baseball, and diving.

Father hockey, football, baseball, golf, professional wrestling, and
or

Guardian:car racing.

Approximately sixty per cent of the sample indicated that both their father and mother were born in Canada. The remainder pointed out that at least one parent was born outside of Canada. Sixty-five per cent of the total revealed that the head of the household had at least some high school training as their educational experience.

With respect to religious preference, sixty-two per cent were Protestant, twenty-seven per cent Catholic, two per cent were Jewish, three per cent were some other religion and seven per cent indicated no preference. Attendance at religious services was more frequent among the girls than among the boys.

Secondary students revealed that they attended sporting events in the summer and winter quite frequently. Although approximately two-thirds of the total indicated that they attend once or twice per month or more, it appears that attendance in the winter is somewhat lower than that during the summer.

Grade twelve girls had the highest raw score mean in the Need for Approval scale. They were followed by grade ten girls, grade twelve boys, and grade ten boys. There was a significant difference between the grade ten boys and the girls in grades ten and twelve.

The self-esteem scale results showed that grade ten girls had the highest positive scale mean. This group was followed by grade twelve girls, grade ten boys and grade twelve boys. Grade ten girls

versus grade twelve girls and grade ten girls versus grade twelve boys differed significantly at the .01 level.

Grade ten girls had the highest positive scale mean in Rosenberg's Relationship With Father scale. They were closely followed by grade twelve girls, grade twelve boys, and grade ten boys. It was found that there was no significant difference among the means.

A summary of the Classification of Sports and Physical Activities is as follows:

1. Physical Activities Providing Enjoyable Social Experiences

Boys: dancing, swimming, football, tennis, hockey and golf.

Girls: dancing, swimming, tennis, skiing, basketball and baseball.

2. Physical Activities for Developing Health and Fitness

Boys: track and field, football, swimming, gymnastics, weight lifting and hockey.

Girls: swimming, gymnastics, track and field, conditioning exercises, tennis and basketball.

3. Physical Activities for Providing Thrills at Some Risk

Boys: car racing, football, hockey, skiing, sky diving, and diving.

Girls: car racing, skiing, sky diving, football, equestrian sports, and hockey.

4. Physical Activities for Showing the Beauty in Human Movement

Boys: ballet, gymnastics, figure skating, swimming, diving, and track and field.

Girls: ballet, figure skating, gymnastics, swimming, diving and skiing.

5. Physical Activities for Releasing Tension

Boys: football, hockey, swimming, boxing, track and field and tennis.

Girls: swimming, tennis, dancing, baseball, track and field and basketball.

6. Physical Activities that Require Prolonged and Strenuous Training

Boys: track and field, football, hockey, weight training, swimming and boxing.

Girls: track and field, football, swimming, hockey, gymnastics and ballet.

7. Physical Activities Based on Chance or Luck

Boys: card games, horse racing, car racing, billiards, golf, and hunting and fishing.

Girls: horse racing, card games, car racing, basketball, baseball, and billiards.

It was found that:

1. There was a relationship between interest in that which is beautiful and participation in physical activity involving the beauty of human movement.
2. Interest in that which involves other people was related to participation in physical activity as a social experience.
3. Frequency of participation in activities was related to best friends' participation.
4. A relationship existed between participation in physical activity for health and fitness, and the frequency of viewing health and physical fitness programs on television.

5. Participation in physical activity as the pursuit of vertigo was related to the frequency of watching dangerous and thrilling sports on television.
6. Viewing programs showing the beauty of human movement was related to participation in physical activity as an aesthetic experience.
7. A relationship was found between the frequency of reading about sports in newspapers and the reading about the same sports in books and magazines.
8. Participation in physical activity as a social experience was related to the number of clubs sponsoring physical activities that the individual belonged to.
9. Religious preference was related to religious devotion.
10. Attendance at spectator sports in the summer was found to be related to attendance at the same in the winter.

Conclusions

1. Based on the results of the attitude scores, it would appear that the attitude towards physical activity in terms of the sub-domains studied is generally favorable.
2. Interest in physical activity is considered to be definitely influenced by the effect of various communication media, although the exposure to various sports is somewhat limited.
3. The semantic differential as a measuring instrument in this inventory is shown to have moderately high reliability and is considered to be quite useful in detecting differences between attitudes.

4. An expression of the desire to participate in a greater variety of physical activities is evidenced.
5. The sub-domain of physical activity as games of chance must be questioned. The low scores and reliabilities obtained appear to indicate that this particular sub-domain should not be included in the realm of physical activity.
6. Participation in different types of physical activity is influenced by best friends.
7. Boys show more interest in physical activity than girls do. This is clearly shown by television viewing, newspaper reading, and attendance at spectator sports.
8. The low scores on attitudes toward physical activity as the pursuit of vertigo and as an ascetic experience indicate an unfavorable attitude. From this, it may be concluded that there is a hesitancy to participate in activities of this nature.
9. It would appear that clubs sponsoring sports and physical activities outside of the school environment have a definite role to play in providing a much-needed outlet for individuals who desire physical activity.
10. Secondary school girls appear very interested in things which are beautiful.

Recommendations

1. The same three inventories might be used to test a different population, that is, rural secondary school students.
2. A longitudinal study could be initiated that might detect attitude

and interest changes within various populations.

3. The validity of the responses obtained in this study could be evaluated by means of a follow-up interview.
4. The test items could be modified so as to incorporate different populations, that is, adults or junior high school students.
5. A detailed scrutiny and possible revision of the attitudinal sub-domains could be undertaken.
6. The development of a study which would include an extensive analysis of various school physical education programs as well as the assessment of attitudes and interests. The data could then be treated to determine whether or not the various programs were meeting the needs of the students.

Recommendations for Physical Education Programs

As a detailed analysis of the various programs was not undertaken, the recommendations made will be subjective, based on personal experience as well as association with personnel involved in various aspects of the program. They are:

1. A wider variety of activities should be offered. With respect to this recommendation, the possibility of an elective program should be examined.
2. More activities which make use of the winter-type climate should be included in the program, for example, skiing, figure skating, hockey, social skating.
3. Instruction in activities that could be used after the completion of high school, for example, tennis, golf, skiing, curling, etc.

4. Physical education should be made compulsory for all grade levels in high school.
5. The inclusion of a physical fitness area in the program.
6. An emphasis on activities that are socially-oriented at the early grade levels, for example, social dance, tennis.
7. A constant evaluation of student needs and wants in comparison to program provisions.

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APPENDIX A

TEST INVENTORIES AND INSTRUCTIONS

PROJECT M: PROCEDURES FOR ADMINISTERING INVENTORIES

Instructions to Test Administrators:

1. There are three inventories to be administered within a single period in the following order:
 - (a) BAT: This inventory provides seven attitude and two body image scores. Data need to be subjected to an item analysis program (RAVE) to acquire total scores or hand-scored to acquire the total scores.
 - (b) GIN: This inventory provides general information regarding interests and activities of members of the secondary school samples. Some of the questions will need coding; others can be punched directly from the inventory. Again, follow instructions in the Code Manual.
 - (c) SENAWS: This inventory provides three scores: a score on a "Need for Approval" scale, a score on a self-esteem scale and also a score for "relationship with father." Sport classification is also on this inventory. The special instructions for coding these are provided in the Code Manual. These will need to be scored by hand and then transferred to punched card.
2. You will need some assistance--preferably someone who understands fully the nature of the project. In addition, you should have a teacher present to maintain the rapport of the group. Do not allow the teacher to say anything more than to introduce you to the group. This will prevent any contamination prior to administering the inventories.
3. The inventory should be given in a class room--not the gymnasium. If possible, there should be a space between each subject while he responds to the questions.
4. Be sure you have adequate numbers of inventories, together with any additional material you may need; such as extra pencils.
5. Be absolutely certain that all subjects understand the instructions both before they begin and later, should questions arise. During the time that the subjects are filling out the inventories, walk about the room, since many people are reluctant to ask a question until you are near or next to them. Check frequently to see if they are answering correctly.

Instructions to Subjects: Read the following statement to the subjects:

WE ARE HERE TODAY TO ASK YOU TO BECOME A PART OF A RESEARCH PROJECT DESIGNED TO GET TO KNOW MORE ABOUT HIGH SCHOOL STUDENTS. THIS IS AN INTERNATIONAL PROJECT, WITH OTHER STUDENTS TAKING PART FROM ENGLAND, UNITED STATES AND AUSTRALIA. WE WILL BE ASKING YOU TO ANSWER QUESTIONS ABOUT A WIDE VARIETY OF SUBJECTS. TO DO THIS, WE HAVE ARRANGED THESE QUESTIONS INTO BOOKLETS THAT WE CALL INVENTORIES. THERE ARE THREE OF THESE ALTOGETHER. NONE OF THE QUESTIONS ARE DIFFICULT. THIS IS NOT LIKE A TEST WITH RIGHT AND WRONG ANSWERS. IN MOST CASES, YOU WILL NEED ONLY TO EXPRESS YOUR OPINION ABOUT DIFFERENT SUBJECTS; IN FACT, YOU MAY EVEN FIND THE EXPERIENCE INTERESTING AND ENJOYABLE, SINCE THERE ARE NO DATES TO REMEMBER, NOR MATHEMATICAL PROBLEMS TO SOLVE. FROM TIME TO TIME YOU WILL COME ACROSS "PHYSICAL ACTIVITY"--FOR US THIS REFERS TO ALL TYPES OF ACTIVE GAMES, SPORTS AND DANCE.

YOU HAVE THREE INVENTORIES:

1. BAT--white
2. GIN--pink
3. SENAPS--blue

DO THEM IN THAT ORDER. THEY REQUIRE NO EXPLANATIONS. SIMPLY READ THE INSTRUCTIONS AND ANSWER THE QUESTIONS AS ASKED. HOWEVER, PAY NO ATTENTION TO THESE OTHER INVENTORIES UNTIL YOU HAVE COMPLETED THE FIRST ONE. PLEASE DO NOT WRITE OR PUT ANY MARKS ON THE INSTRUCTION SHEET. READ THE INSTRUCTIONS CAREFULLY, BUT DO NOT BEGIN UNTIL YOU ARE TOLD TO DO SO.

SO THAT EVERYONE UNDERSTANDS EXACTLY WHAT IS REQUIRED, I WOULD LIKE TO QUICKLY GO OVER THE INSTRUCTIONS.

ARE THERE ANY QUESTIONS?

IF NOT, YOU MAY BEGIN, KEEPING IN MIND THAT AS SOON AS YOU HAVE FINISHED THE FIRST INVENTORY, CHECK TO SEE THAT YOU HAVE ANSWERED ALL QUESTIONS, AND THEN GO ON TO THE SECOND AND THIRD INVENTORY IMMEDIATELY.

YOU SHOULD WORK FAIRLY QUICKLY, BUT CAREFULLY. I WOULD LIKE TO REMIND YOU THAT ALL INFORMATION IS HELD STRICTLY CONFIDENTIAL. IT WILL ONLY BE SEEN BY THOSE WHO ARE CONNECTED WITH THE RESEARCH PROJECT. THE SUCCESS OF THE RESEARCH DEPENDS HEAVILY, OF COURSE, UPON EXPRESSING HOW YOU FEEL ABOUT EACH OF THE QUESTIONS. IF YOU HAVE ANY QUESTIONS DURING THE HOUR, SIMPLY RAISE YOUR HAND, AND I WILL BE GLAD TO ANSWER THEM.

WHEN YOU FINISH, CHECK TO SEE THAT ALL QUESTIONS HAVE BEEN ANSWERED ON EVERY PAGE. THEN SIT QUIETLY UNTIL THE OTHERS FINISH.

NOW BEGIN:

(SAMPLE)
(Do Not Mark This Page)

B.A.T. (rev.)
3/30/66

INSTRUCTIONS
(using direct response)

SEM. D. SCALES of ATPA and BI

(Project M)

The purpose of this inventory is to measure the meaning for you of certain concepts of physical activity by judging them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you. On each page of the booklet you will find a different idea or concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order in which they are given.

Here is how you are to use these scales:

If you feel that the concept in the box at the top of the page, for example "REFEREE," is very closely related to one end of the scale, you should place your check-mark as follows:

REFEREE

fair X : : : : : : : unfair
 1 2 3 4 5 6 7

or

fair : : : : : : X : unfair
 1 2 3 4 5 6 7

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

fair : X : : : : : : unfair
 1 2 3 4 5 6 7

or

fair : : : : : X : : unfair
 1 2 3 4 5 6 7

If the concept seems only slightly related to one side as opposed to the other side (but is not neutral), then you should check as follows:

fair : :X : : : : : unfair
 1 2 3 4 5 6 7

or

fair : : : :X : : : unfair
 1 2 3 4 5 6 7

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you are judging. If you consider the concept to be neutral on the scale (that is, both sides of the scale seem equally associated with the concept), or if the scale makes no sense (that is, it is unrelated to the concept), then you should place your check-mark in the middle space:

safe : : :X : : : dangerous
 1 2 3 4 5 6 7

IMPORTANT: (1) Place your check-mark in the middle of spaces, not on the boundaries:

NOT THIS
 THIS X
 :X : : : : :

- (2) Be sure you check every scale for every concept--
do not omit any.
- (3) Never put more than one check-mark on a single scale.
- (4) The numbers under each scale are merely to assist in analysis of the data by computers. You do not need to pay any attention to them.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked a similar item earlier in the test. Make each item a separate and independent judgement. Work at a fairly high speed through the test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless because we want your true impressions.

B. A. T.: Rev. 3/29/66

Name (print) _____ School _____ Grade or Form _____

Express on the scales below what this concept means to you

PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE

Sports, games and other forms of physical recreation whose primary purpose is to provide opportunities for social participation; that is, to meet new people and continue personal friendships.

As you proceed, always be thinking about the idea or concept in the box.

1. good ____ : ____ : ____ : ____ : ____ : ____ : ____ bad
 1 2 3 4 5 6 7

2. worthless ____ : ____ : ____ : ____ : ____ : ____ : ____ worthwhile
 1 2 3 4 5 6 7

3. pleasant ____ : ____ : ____ : ____ : ____ : ____ : ____ unpleasant
 1 2 3 4 5 6 7

4. sour ____ : ____ : ____ : ____ : ____ : ____ : ____ sweet
 1 2 3 4 5 6 7

5. nice ____ : ____ : ____ : ____ : ____ : ____ : ____ awful
 1 2 3 4 5 6 7

6. sad ____ : ____ : ____ : ____ : ____ : ____ : ____ happy
 1 2 3 4 5 6 7

7. clean ____ : ____ : ____ : ____ : ____ : ____ : ____ dirty
 1 2 3 4 5 6 7

8. relaxed ____ : ____ : ____ : ____ : ____ : ____ : ____ tense
 1 2 3 4 5 6 7

PHYSICAL ACTIVITY FOR HEALTH AND FITNESS

Participating in physical activity
primarily to improve one's health
and physical fitness.

9. good : : : : : : bad
 1 2 3 4 5 6 7
10. worthless : : : : : : worthwhile
 1 2 3 4 5 6 7
11. pleasant : : : : : : unpleasant
 1 2 3 4 5 6 7
12. sour : : : : : : sweet
 1 2 3 4 5 6 7
13. nice : : : : : : awful
 1 2 3 4 5 6 7
14. sad : : : : : : happy
 1 2 3 4 5 6 7
15. clean : : : : : : dirty
 1 2 3 4 5 6 7
16. relaxed : : : : : : tense
 1 2 3 4 5 6 7

PHYSICAL ACTIVITY AS A THRILL BUT INVOLVING SOME RISK
 Physical activities providing, at some risk to the participant, thrills and excitement through speed, acceleration, sudden change of direction, and exposure to dangerous situations.

17. good : : : : : : bad
 1 2 3 4 5 6 7
18. worthless : : : : : : worthwhile
 1 2 3 4 5 6 7
19. pleasant : : : : : : unpleasant
 1 2 3 4 5 6 7
20. sour : : : : : : sweet
 1 2 3 4 5 6 7
21. nice : : : : : : awful
 1 2 3 4 5 6 7
22. sad : : : : : : happy
 1 2 3 4 5 6 7
23. clean : : : : : : dirty
 1 2 3 4 5 6 7
24. relaxed : : : : : : tense
 1 2 3 4 5 6 7

PHYSICAL ACTIVITY AS THE BEAUTY IN HUMAN MOVEMENT

Physical activities which are thought of as possessing beauty or certain artistic qualities such as ballet, gymnastics or figure skating.

25. good : : : : : : bad
 1 2 3 4 5 6 7
26. worthless : : : : : : worthwhile
 1 2 3 4 5 6 7
27. pleasant : : : : : : unpleasant
 1 2 3 4 5 6 7
28. sour : : : : : : sweet
 1 2 3 4 5 6 7
29. nice : : : : : : awful
 1 2 3 4 5 6 7
30. sad : : : : : : happy
 1 2 3 4 5 6 7
31. clean : : : : : : dirty
 1 2 3 4 5 6 7
32. relaxed : : : : : : tense
 1 2 3 4 5 6 7

PHYSICAL ACTIVITY FOR THE RELEASE OF TENSION

The participation (or watching others participate) in physical activities to get away from the problems of modern living; to provide a release from "pent up emotions."

33. good : : : : : : bad
 1 2 3 4 5 6 7
34. worthless : : : : : : worthwhile
 1 2 3 4 5 6 7
35. pleasant : : : : : : unpleasant
 1 2 3 4 5 6 7
36. sour : : : : : : sweet
 1 2 3 4 5 6 7
37. nice : : : : : : awful
 1 2 3 4 5 6 7
38. sad : : : : : : happy
 1 2 3 4 5 6 7
39. clean : : : : : : dirty
 1 2 3 4 5 6 7
40. relaxed : : : : : : tense
 1 2 3 4 5 6 7

PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING

Physical activities which require long periods of strenuous and often painful training; which involve stiff competition and demands that the individual give up a number of pleasures for a period of time.

41. good : : : : : : bad
 1 2 3 4 5 6 7
42. worthless : : : : : : worthwhile
 1 2 3 4 5 6 7
43. pleasant : : : : : : unpleasant
 1 2 3 4 5 6 7
44. sour : : : : : : sweet
 1 2 3 4 5 6 7
45. nice : : : : : : awful
 1 2 3 4 5 6 7
46. sad : : : : : : happy
 1 2 3 4 5 6 7
47. clean : : : : : : dirty
 1 2 3 4 5 6 7
48. relaxed : : : : : : tense

PHYSICAL ACTIVITY AS GAMES OF CHANCE

Games and sports where chance
and luck are more important than
skill in determining the winner,
such as dice or horse racing.

49. good : : : : : : bad
1 2 3 4 5 6 7
50. worthless : : : : : : worthwhile
1 2 3 4 5 6 7
51. pleasant : : : : : : unpleasant
1 2 3 4 5 6 7
52. sour : : : : : : sweet
1 2 3 4 5 6 7
53. nice : : : : : : awful
1, 2 3 4 5 6 7
54. sad : : : : : : happy
1 2 3 4 5 6 7
55. clean : : : : : : dirty
1 2 3 4 5 6 7
56. relaxed : : : : : : tense
1 2 3 4 5 6 7

IMPORTANT: If using answer sheet begin sheet 2 here

MY BODY: AS I WOULD LIKE TO SEE IT

- | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---------------|-------|-------|-------|-------|-------|-------|-------|------------|
| 1. relaxed | _____ | _____ | _____ | _____ | _____ | _____ | _____ | tense |
| 2. ugly | _____ | _____ | _____ | _____ | _____ | _____ | _____ | beautiful |
| 3. usual | _____ | _____ | _____ | _____ | _____ | _____ | _____ | unusual |
| 4. sick | _____ | _____ | _____ | _____ | _____ | _____ | _____ | healthy |
| 5. graceful | _____ | _____ | _____ | _____ | _____ | _____ | _____ | awkward |
| 6. inadequate | _____ | _____ | _____ | _____ | _____ | _____ | _____ | adequate |
| 7. rugged | _____ | _____ | _____ | _____ | _____ | _____ | _____ | delicate |
| 8. clean | _____ | _____ | _____ | _____ | _____ | _____ | _____ | dirty |
| 9. hard | _____ | _____ | _____ | _____ | _____ | _____ | _____ | soft |
| 10. short | _____ | _____ | _____ | _____ | _____ | _____ | _____ | tall |
| 11. light | _____ | _____ | _____ | _____ | _____ | _____ | _____ | heavy |
| 12. large | _____ | _____ | _____ | _____ | _____ | _____ | _____ | small |
| 13. masculine | _____ | _____ | _____ | _____ | _____ | _____ | _____ | feminine |
| 14. feeble | _____ | _____ | _____ | _____ | _____ | _____ | _____ | vigorous |
| 15. flexible | _____ | _____ | _____ | _____ | _____ | _____ | _____ | rigid |
| 16. weak | _____ | _____ | _____ | _____ | _____ | _____ | _____ | strong |
| 17. free | _____ | _____ | _____ | _____ | _____ | _____ | _____ | restricted |
| 18. persist | _____ | _____ | _____ | _____ | _____ | _____ | _____ | letting up |
| 19. passive | _____ | _____ | _____ | _____ | _____ | _____ | _____ | active |
| 20. hot | _____ | _____ | _____ | _____ | _____ | _____ | _____ | cold |
| 21. excitable | _____ | _____ | _____ | _____ | _____ | _____ | _____ | calm |
| 22. simple | _____ | _____ | _____ | _____ | _____ | _____ | _____ | complex |
| 23. fast | _____ | _____ | _____ | _____ | _____ | _____ | _____ | slow |
| 24. permanent | _____ | _____ | _____ | _____ | _____ | _____ | _____ | changeable |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

MY BODY: AS IT REALLY IS

1 2 3 4 5 6 7

25. relaxed ____:____:____:____:____:____:____ tense
26. ugly ____:____:____:____:____:____:____ beautiful
27. usual ____:____:____:____:____:____:____ unusual
28. sick ____:____:____:____:____:____:____ healthy
29. graceful ____:____:____:____:____:____:____ awkward
30. inadequate ____:____:____:____:____:____:____ adequate
31. rugged ____:____:____:____:____:____:____ delicate
32. clean ____:____:____:____:____:____:____ dirty
33. hard ____:____:____:____:____:____:____ soft
34. short ____:____:____:____:____:____:____ tall
35. light ____:____:____:____:____:____:____ heavy
36. large ____:____:____:____:____:____:____ small
37. masculine ____:____:____:____:____:____:____ feminine
38. feeble ____:____:____:____:____:____:____ vigorous
39. flexible ____:____:____:____:____:____:____ rigid
40. weak ____:____:____:____:____:____:____ strong
41. free ____:____:____:____:____:____:____ restricted
42. persist ____:____:____:____:____:____:____ letting up
43. passive ____:____:____:____:____:____:____ active
44. hot ____:____:____:____:____:____:____ cold
45. excitable ____:____:____:____:____:____:____ calm
46. simple ____:____:____:____:____:____:____ complex
47. fast ____:____:____:____:____:____:____ slow
48. permanent ____:____:____:____:____:____:____ changeable

1 2 3 4 5 6 7

G.I.N. 3/30/66

Name (print) _____ School _____ Grade or Form _____

GENERAL INFORMATION INVENTORY

(Project M)

INSTRUCTIONS

The purpose of this inventory is to find out about your various interests and activities. If you look at the questions now you will see that boxes () or spaces () are given for your answers. For each question write in the answer or mark the box that would be best for you.

EXAMPLE

at least	once or	less often
once per	twice per	or
week	month	never

On the average, how often
do you eat carrots?

--	--	--

The example shows how you would answer if, on the average,
you eat carrots at least once each week.

Answer each question after reading it carefully. Choose the answer that is nearest to describing your interests or activities.

1. How interested are you in each of the following? For each question, mark an X in the best box for you.

AMOUNT OF INTEREST			
	very much	some	little or none
(a) <u>Theoretical Matters</u> . The discovery of truth, the use of logic and careful judgements as in science and philosophy.	<u> </u>	<u> </u>	<u> </u> 1
(b) <u>That which is practical and useful</u> . The manufacturing and selling of goods and products to make money. The work of the business man.	<u> </u>	<u> </u>	<u> </u> 2
(c) That which is <u>beautiful</u> . The importance of form and harmony as in various forms of art. The creative, individualistic person.	<u> </u>	<u> </u>	<u> </u> 3
(d) That which involves <u>other people</u> . The unselfish liking and helping of other persons to develop warm friendships.	<u> </u>	<u> </u>	<u> </u> 4

		very much	some	little or none	
(e)	<u>Politics.</u> The interest in personal success, power, influence and esteem.	—	—	—	5
(f)	<u>Religious matters.</u> The mysteries of life. The meaning of life in this and other worlds.	very much	some	little or none	6
2.	<u>Interest in Physical Activity.</u> We have classified physical activity into seven types. They will be familiar to you from a previous inventory. They are as follows:				
(a)	PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE. Sports, games, and other forms of physical recreation whose primary purpose is to provide opportunities for social participation; that is, to meet new people and continue personal friendships.				
(b)	PHYSICAL ACTIVITY FOR HEALTH AND FITNESS. Participating in physical activity primarily to improve one's health and physical fitness.				
(c)	PHYSICAL ACTIVITY AS A THRILL BUT INVOLVING SOME RISK. Physical activities providing, at some risk to the participant, thrills and excitement through speed, acceleration, sudden change of direction, and exposure to dangerous situations.				
(d)	PHYSICAL ACTIVITY AS THE BEAUTY IN HUMAN MOVEMENT. Physical activities which are thought of as possessing beauty or certain artistic qualities such as ballet, gymnastics, or figure skating.				
(e)	PHYSICAL ACTIVITY FOR THE RELEASE OF TENSION. The participation (or watching others participate) in physical activities to get away from the problems of modern living; to provide a release from "pent up emotions."				
(f)	PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING. Physical activities which require long periods of strenuous and often painful training; which involve stiff competition and demands that the individual give up a number of pleasures for a period of time.				
(g)	PHYSICAL ACTIVITY AS GAMES OF CHANCE. Games and sports where chance and luck are more important than skill in determining the winner, such as throwing dice, or betting on horses or dogs.				
2A.	How often do you actually take part in physical activities what are best described by one or more of the following categories? (when in season). Mark one box in each row.				

	at least once per week	once or twice per month	less often or never	
(a) PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE	—	—	—	7
(b) PHYSICAL ACTIVITY FOR HEALTH AND FITNESS	—	—	—	8
(c) PHYSICAL ACTIVITY AS A THRILL BUT INVOLVING SOME RISK	—	—	—	9
(c) PHYSICAL ACTIVITY AS THE BEAUTY IN HUMAN MOVEMENT	—	—	—	10
(e) PHYSICAL ACTIVITY FOR THE RELEASE OF TENSION	—	—	—	11
(f) PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING	—	—	—	12
(g) PHYSICAL ACTIVITY AS GAMES OF CHANCE	—	—	—	13

2B. Now, thinking of your best friends, on the average, how often do they actually take part (when in season)? Mark one box in each row.

	At least once per week	Once or twice per month	less often or never	
(a) PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE	—	—	—	14
(b) PHYSICAL ACTIVITY FOR HEALTH AND FITNESS	—	—	—	15
(c) PHYSICAL ACTIVITY AS A THRILL BUT INVOLVING SOME RISK	—	—	—	16
(d) PHYSICAL ACTIVITY AS THE BEAUTY IN HUMAN MOVEMENT	—	—	—	17
(d) PHYSICAL ACTIVITY FOR THE RELEASE OF TENSION	—	—	—	18
(f) PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING	—	—	—	19
(g) PHYSICAL ACTIVITY AS GAMES OF CHANCE	—	—	—	20

3. How often do you watch each of the following types of physical activity on television?

	at least once per week	once or twice per month	less often or never	
(a) teen dance programmes	✓	✓	✓	21
(b) exercise and physical fitness programmes	—	—	—	22
(c) special sports events showing dangerous and thrilling sports	—	—	—	23
(d) programmes showing the beauty of human movement (gymnastics, fancy diving, etc.)	—	—	—	24
(e) college or professional sports	—	—	—	25

4. How often do you read about sports and physical activity in the newspaper?

5. How often do you read about sports and physical activity in magazines or books?

6. To how many clubs or organizations (outside of school) sponsoring sports or physical activity do you belong?

7. Is there a television set in your home?

8. On the average, how many hours do you watch television each week? (for example, if you watch 2 hours each day, then you watch 2×7 or 14 hours each week).

(a) In summer _____ (number of hours) 30-31

(b) In winter _____ (number of hours) 32-33

9. On the average, how many hours do you watch sports on television each week?

(a) In summer _____ (number of hours) 34-35

(b) In winter _____ (number of hours) 36-37

- 1. Graduate or professional training after first college degree
- 2. College or university degree
- 3. Some college training (1 year or more)
- 4. High school graduate
- 5. Some high school (completed grade 10 or 11)
- 6. Junior high school (completed grade 7, 8, or 9)
- 7. Less than seven years completed

65

(b) What does the head of your household do? What is his or her job?

(c) Briefly describe the kind of work they do at this job.

66-69

22. What is your religious preference (mark one only) (optional)

- Catholic
- Jewish
- Protestant _____ (denomination or faith)
- None
- Other _____ (write in)

23. How often do you attend religious services? (optional)

- Once or more per week
- Once or twice per month
- Less often
- Never

68

24. On the average how often do you attend sporting events in person
(consider all spectator sports)

at least once once or twice less often
per week per month or never

- | | | | | |
|----------------------------|-------|--------|---|----|
| (a) in summer | — | — | — | 69 |
| (b) in winter | — | — | — | 70 |
| 25. Are you a boy or girl? | — boy | — girl | | |

THANK YOU

SENAPS 3/29/66
(Project M)

Name (print) _____ School _____ Grade or Form _____
(Last name first)

NAP SCALE

INSTRUCTIONS

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally. If for you the statement is true, circle the T. If false, circle the F.

EXAMPLE

T F 1. Horses have two legs.

T F 1. Before voting I would thoroughly investigate the qualifications of all the candidates.

T F 2. I never hesitate to go out of my way to help someone in trouble.

T F 3. It is sometimes hard for me to go on with my work if I am not encouraged.

T F 4. I have never intensely disliked anyone.

T F 5. On occasion I have had doubts about my ability to succeed in life.

T F 6. I sometimes feel resentful when I don't get my way.

T F 7. I am always careful about my manner of dress.

T F 8. My table manners at home are as good as when I eat out in a restaurant.

T F 9. If I could get into a movie without paying and be sure I was not seen, I would probably do it.

T F 10. On a few occasions, I have given up doing something because I thought too little of my ability.

T F 11. I like to gossip at times.

T F 12. There have been times when I felt like rebelling against people in authority even though I knew they were right.

- T F 13. No matter who I'm talking to, I'm always a good listener.
- T F 14. I can remember "playing sick" to get out of something.
- T F 15. There have been occasions when I took advantage of someone.
- T F 16. I'm always willing to admit it when I make a mistake.
- T F 17. I always try to practice what I preach.
- T F 18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
- T F 19. I sometimes try to get even, rather than forgive and forget.
- T F 20. When I don't know something I don't at all mind admitting it.
- T F 21. I am always courteous , even to people who are disagreeable.
- T F 22. At times I have really insisted on having things my own way.
- T F 23. There have been occasions when I felt like smashing things.
- T F 24. I would never think of letting someone else be punished for my wrongdoings.
- T F 25. I never resent being asked to return a favor.
- T F 26. I have never been upset when people expressed ideas very different from my own.
- T F 27. I would never make a long trip without checking the safety of my car.
- T F 28. There have been times when I was quite jealous of the good fortune of others.
- T F 29. I have almost never felt the urge to tell someone off.
- T F 30. I am sometimes irritated by people who ask favors of me.
- T F 31. I have never felt that I was punished without cause.
- T F 32. I sometimes think when people have a misfortune they only got what they deserved.
- T F 33. I have never deliberately said something that hurt someone's feelings.

SES SCALE

The following questions explain themselves. Read each carefully, then place an X opposite the best statement for you. There are no "right" answers. It is your opinion that counts.

1. I am able to do things as well as most other people.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

2. I wish that I could have more respect for myself.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

3. I take a positive attitude toward myself.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

4. All in all, I am inclined to feel that I am a failure.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

5. I feel that I'm a person of worth, at least on an equal plane with others.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

6. I feel that I do not have much to be proud of.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

7. I feel that I have a number of good qualities.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

8. I certainly feel useless at times.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

9. On the whole, I am satisfied with myself.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

10. At times I think I am no good at all.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

11. When you were growing up, who appeared to be your father's favorite child?

1. I did
2. Older brother
3. Older sister
4. Younger brother
5. Younger sister
6. Had no favorite as far as I know
7. Different children at different times.

12. During this period, did your father know who most of your friends were?

1. Knew who all were
2. Knew who most were
3. Knew who some were
4. Knew none, almost none

13. Which parent is it easier for you to talk to?

1. Father much more
2. Father somewhat more
3. Both about same
4. Mother somewhat more
5. Mother much more

14. Which parent is more likely to praise you?

1. Father much more
2. Father somewhat more
3. Both about same
4. Mother somewhat more
5. Mother much more

15. Which parent shows you more affection?

1. Father much more
2. Father somewhat more
3. Both about same
4. Mother somewhat more
5. Mother much more

16. When your parents disagree, whose side are you usually on?

1. Father much more
 2. Father somewhat more
 3. Both about same
 4. Mother somewhat more
 5. Mother much more
-

CLASSIFICATION OF SPORTS & PHYSICAL ACTIVITY

INSTRUCTIONS

This is the last one! You will remember from other inventories the different types of physical activity such as SOCIAL EXPERIENCE, HEALTH AND FITNESS, etc. Keep the definitions of each of these in mind as you answer the following questions.

1. What 2 sports or physical activities do you think are best for providing enjoyable SOCIAL EXPERIENCES?

1. _____
2. _____

2. What two physical activities do you think are the best for developing HEALTH AND FITNESS?

1. _____
2. _____

3. What two physical activities are best for providing THRILLS AT SOME RISK?

1. _____
2. _____

4. What two physical activities do you think are best for showing THE BEAUTY OF HUMAN MOVEMENT?

1. _____
2. _____

5. What two physical activities do you think are best for RELEASING TENSION?

1. _____
2. _____

6. What two physical activities do you think require the most PROLONGED AND STRENUOUS TRAINING?

1. _____
2. _____

7. What two sports or physical activities do you think are based mostly on CHANCE OR LUCK?

1. _____
2. _____

APPENDIX B

CODE MANUALS

4/4/66

PROJECT M: CODE MANUAL^XIntroduction

Data from Project M are from secondary school students in Australia, Canada, England and the United States. Three inventories were used:

- (1) BAT Rev.: Providing attitude and body image scores via the semantic differential.
- (2) GIN: General Information Inventory, providing interest and basic personal data.
- (3) SENAPS: Proves "self esteem," "need for approval," "relationship with father," and sport classification data.

With the exception of question #21 in GIN, inventories are alike for all countries.

^XNOTE: Not to be confused with Pilot Study (Janesville) code manual (yellow cover: dated 2/2/66).

DECK ONE: BAT-Rev. - Semantic Differential - Raw Data
(hand punched or via Digetek)

COLUMN

CONTENTS

1 - 56: Responses to eight items for each of seven attitude concepts, pp 1-7 of inventory: social, health and fitness, vertigo, aesthetics, catharsis, ascetic, chance.

57-72: BLANK

73: 1 (deck #)

74: Grade or Form: 1: 10th grade or 4th Form
2: 12th grade or 6th form

75: Sex: 1: male
2: female

76-79: Pupil number: 0001 - 9999 (See Project
M: Code Manual-Supplement)

80: BLANK

DECK TWO: BAT-Rev. - Semantic Differential - Raw Data (Cont'd)
(hand punched or via Dig tek)

COLUMN

CONTENTS

1 - 48: Responses to 24 items on each of 2
body image concepts: ideal body,
perceived body.

1 - 49: BLANK

73: 2 (deck #)

74: Grade or Form: 1: 10th grade or 4th form
2: 12th grade or 6th form

75: Sex: 1: male
2: female

76 - 79 Pupil number: 0001 - 9999 (See Project
M: Code Manual-Supplement)

80: BLANK

DECK THREE: GIN - General Information Inventory

1. Values: After Allport - Vernon - Lindzey and Spranger typology.

How interested are you in each of the following?

Col. 1: theoretical matters
 Col. 2: practical and useful
 Col. 3: beautiful
 Col. 4: other people
 Col. 5: politics
 Col. 6: religious matters

Code as follows:

0: improper or no response
 1: very much
 2: some
 3: little or none

- 2A. How often do you actually take part in physical activities that are best described by one or more of the following categories (when in season)?

Col. 7: social experience
 Col. 8: health
 Col. 9: thrills and risk
 Col. 10: beauty in movement
 Col. 11: release of tension
 Col. 12: strenuous training
 Col. 13: games of chance

Code as follows:

0: improper or no response
 1: once or twice a week
 2: once or twice a month
 3: less often

- 2B. Now, thinking of your best friends, how often do they actually take part?

Col. 14: social
 Col. 15: health
 Col. 16: thrill and risk
 Col. 17: beauty in movement
 Col. 18: release of tension
 Col. 19: strenuous training
 Col. 20: games of chance

Code as follows:

0: improper or no response
 1: once or twice a week
 2: once or twice a month
 3: less often

3. How often do you watch each of the following types of physical activity on television?

Col. 21: teen dance
 Col. 22: physical fitness
 Col. 23: thrilling sports
 Col. 24: beauty of movement
 Col. 25: college or professional sports

Code as follows:

0: improper or no response
 1: once a week
 2: once or twice a month
 3: less often

How often do you read about sports and physical activity?

4. Col. 26: in the newspaper Code as follows:
5. Col. 27: in magazines or books
0: improper or no response
1: once a week
2: once or twice a month
3: less often

6. To how many clubs or organizations sponsoring sports or physical activity do you belong?
Col. 28: Code as follows:
0: improper or no response
1: two or more
2: one
3: none

7. Is there a television set in your home?
Col. 29: Code as follows:
0: improper or no response
1: yes
2: no

8. Watching television--in general
Col. 30-31: hours per week- summer
Col. 32-33: hours per week- winter

9. Watching television--sports
Col. 34-35: hours per week - summer
Col. 36-37: hours per week - winter
Interest in Specific Sport^x

10. Col. 38-40: in what sport or physical activity do you like to participate the most? (Consider all types of sports from swimming to field hockey to dancing). Write in the sport you like to play the most.

11. Col. 41-43: In what sport or physical activity does your father or guardian like to participate the most?

^xCoding based upon classification of responses. See Project M: Code Manual -- Supplement to #16.

12. Col. 44-46: If you had the chance, name the sport in which you would like to participate most of all (even though you may never have played it before).
13. Col. 47-49: What is your favorite sport to attend as a spectator?
14. Col. 50-52: What is your father's (or guardian) favorite sport to attend as a spectator?
15. Col. 53-55: What is your favorite sport on television?
16. Col. 56-58: What is your father's favorite sport on television?
17. How old are you? (Months as of February 1, 1966)

Col. 59-61: 000: no response

18. How many brothers and sisters do you have?

Col. 62: Total
0: none or no response
1: 1
...:
9: 9 or more

19. How many of your brothers and sisters are older than you are?

Col. 63: Total
0: none or no response
1: 1
...:
9: 9 or more

20. In what country were your parents born:

Col. 64 Code as follows:

0: no response
1: father and mother in home country
2: father in home country
3: mother in home country
4: father and mother not in home country

21. Head of Household:

(a) How much education has the head of your household had?

CANADA AND U.S. ONLY:

(Continued)

Col. 65:

Code as follows:

- 0: no response
- 1: graduate training
- 2: college
- 3: some college
- 4: high school graduate
- 5: some high school
- 6: junior high school
- 7: less than 7 years

AUSTRALIA AND ENGLAND ONLY:

- 0: no response
- 1: university or training college
- 2: grammar school
- 3: technical school
- 4: secondary school
- 5: primary or elementary school
- 6: other

(b), (c) Occupation of head of household

Col. 66: Hollingshead categories Code as follows:
(see 1957 manual)

- 0: improper or no response
- 1: higher executive, proprietors of large concerns and major professionals
- 2: business managers, proprietors of medium sized businesses and lesser professionals
- 3: administrative personnel, small independent business, and minor professionals
- 4: clerical and sales workers, technicians and owners of little businesses
- 5: skilled manual employees
- 6: machine operators and semi-skilled employees
- 7: unskilled employees .

22. What is your religious Preference

Col. 67:

Code as follows:

- 0: improper or no response
- 1: Catholic
- 2: Jewish
- 3: Protestant
- 4: none
- 5: other

DECK THREE (GIN: Cont'd)

23. How often do you attend religious services?

Col. 68: Code as follows:

- 0: improper or no response
- 1: once or more a week
- 2: once or twice a month
- 3: less often
- 4: never

24. On the average, how often do you attend sporting events (consider all spectator sports)?

Col. 69: in summer Code as follows:

Col. 70: in winter

- 0: improper or no response
- 1: once or more per week
- 2: once or twice per month
- 3: less often or never

25. Sex: Coded as part of identification below:

Col. 71-72: BLANK

73: 3 (deck #)

74: Grade or Form: 1: 10th grade or 4th form
2: 12th grade or 6th form

75: Sex: 1: male
2: female

76-79: Pupil number: 0001 - 9999 (See Project M: Code Manual-Supplement)

80: BLANK

DECK FOUR: SENAPS - Total scores from BAT-Rev. - Need for Approval, Self-Esteem, Rel. with Father, and Sport Classification (also recodes).

BAT-Rev. Total Scores

Col. 1-2:	Attitude I.	Social
3-4:	Attitude II:	Health & Fitness
5-6:	Attitude III:	Vertigo
7-8:	Attitude IV:	Aesthetics
9-10:	Attitude V:	Catharsis
11-12:	Attitude VI:	Ascetic
13-14:	Attitude VII:	Chance
15-16:	Ideal Body -	Evaluation
17-18:	Ideal Body -	Potency
19-20:	Ideal Body -	Activity
21-22:	Perceived Body -	Evaluation
23-24:	Perceived Body -	Potency
25-26:	Perceived Body -	Activity

Col. 27-28: Need for approval raw score.¹

Col. 29: Self-Esteem Scale²

Col. 30: Relation to Father Scale²

Code self-esteem as follows:

- 0: no positive scales
- 1: one positive scale
- 2: two positive scales
- 3: three positive scales, in appropriate score
- 4: four positive scales
- 5: five positive scales
- 6: six positive scales

¹D. P. Crowne, and D. Marlowe, The Approval Motive. New York: Wiley, 1964.

²M. Rosenberg, Society and the Adolescent Self-Image. Princeton, N.J.: Princeton University Press, 1965.

Scoring: Self-Esteem Scale

Scale I	- Questions 4, 5, 7 - 2 out of 3 or 3 out of 3 answered positively - positive score
Scale II	-- Questions 1 and 6 - 1 or 2 out of 2 answered positively - positive score
Scale III	- Question 3 answered positively - positive score
Scale IV	- Question 9 answered positively - positive score
Scale V	- Question 2 answered positively - positive score
Scale VI	- Questions 8 and 10 answered positively - positive score

Self-Esteem score is the total number of positive scales

Relation to Father score is total number of positive responses
on Questions 11 through 16.

Listing of Positive Responses Questions 1 through 16:

Q.1 - 3,4	Q.7 - 3,4	Q.13 - 1,2,3
Q.2 - 1,2	Q.8 - 1,2	Q14. - 1,2,3
Q.3 - 3,4	Q.9 - 3,4	Q.15 - 1,2,3
Q.4 - 1,2	Q.10 - 1,2	Q.16 - 1,2,3
Q.5 - 3,4	Q.11 - 1	
Q.6 - 1,2	Q.12 - 1,2	

Col. 31:	Social	recode
32:	Health & Fitness	recode
33:	Vergigo	recode
34:	Aesthetics	recode
35:	Catharsis	recode
36:	Ascetic	recode
37:	Chance	recode
Col. 38:	Body Image - Evaluation	recode
39:	Body Image - Potency	recode
40:	Body Image - Activity	recode
41:	Perceived Body - Evaluation	recode
42:	Perceived Body - Potency	recode
43:	Perceived Body - Activity	recode

Col. 44: Need for Approval recode

Classification of Sport and Physical Activity

NOTE: Coding based upon classification of responses. See
Project M: Code Manual - Supplement.

SUPPLEMENT ONE TO
Project M: CODE MANUAL
(June 28, 1966)

NOTE: This manual provides the coding procedures not given in Project M: CODE MANUAL dated 4/4/66. (green cover)

1. Pupil numbers (decks 1,2,3 & 4)

Col. 76 - 79: 0001 - 0999: Canada
 1001 - 1999: Australia
 2001 - 2999: Birmingham
 3001 - 3999: Cleveland

2. Deck Two Error

Col. 1 - 49 should read 49 - 72: blank.

3. Classification of Sports

Deck 3: items 10 through 16, using columns 38 - 58.

Deck 4: Student classification of sport

Col. 45 - 46: social
 47 - 48: health and fitness
 49 - 50: vertigo
 51 - 52: aesthetics
 53 - 54: catharsis
 55 - 56: ascetic
 57 - 58: chance

CODE AS FOLLOWS:

00: improper or no response
01: judo, karate
02: canoeing

NOTE 1: Activities have been crudely classified into one of the seven classes used in this study. The system permits easy sorting into the various classes by using the first digit of the classification code. Those not readily classifiable, have been assigned other codes.

03: rowing
04: netball
05: cricket
06: Australian rules rugby
07: wrestling
08: boxing
09: flying

Social (10-19)

10: social dancing
11:
12:
13:
14:
15:
16:
17:
18:
19:

NOTE 2: Where an activity is not listed, assign it one of the unused codes. Be certain Master Code Manual in Madison has incorporated the new codes.

Health and Fitness (20-29)

20: weight training and lifting - body building
21: conditioning exercises
22:
23:
24:
25:

Health and Fitness (Cont'd)

26:

27:

28:

29:

Vertigo (30-39)

30: skiing

31: Equestrian sports

32: car and motor cycle racing

33: rodeo

34: motor cycling, other than racing (if TV assume racing)

35: diving

36: sky diving

37: sailing

38: rock and mountain climbing

39: skin diving

Aesthetic (40-49)

40: figure skating

41: dance, other than social

42:

43:

44:

45:

46:

47:

48:

49:

Catharsis (50-59)

- 50: swimming
- 51: tennis
- 52: badminton
- 53: volleyball
- 54: recreational skating or just "skating"
- 55: golf
- 56: water skiing
- 57: curling
- 58: bowling
- 59: hunting and/or fishing

Ascetic (60-69)

- 60: American or Canadian football
- 61: soccer
- 62: rugby
- 63: ice hockey
- 64: basketball
- 65: baseball
- 66: field (grass) hockey
- 67: speed skating
- 68: track & field (athletics)
- 69: gymnastics

Chance (70-79)

- 70: horse racing
- 71: dog racing
- 72: cards or other table games involving some element of chance

73:

74:

75:

76:

77:

78:

79:

Unclassified

80: boxing

81: amateur wrestling

82: professional wrestling

83: biking

84: recreational cycling

85: cycle racing

86: table tennis, ping pong

87: archery

88: soft ball

89: hiking

90: billiards, pool, etc.

91: rounders

92: camping, outing, etc.

93: lacrosse

94: surfing

95: handball

96: polo

97:

98:

99: other (including floor hockey, speedball)

APPENDIX C

CORRESPONDENCE

Faculty of Physical Education,
University of Alberta,
Edmonton, Alberta,
April 12th, 1966.

Edmonton, Alberta,

Dear Sir:

The Fitness Research Unit at the University of Alberta is proposing to conduct a study to assess attitudes toward, and interests in physical activity as held by secondary school students in Edmonton.

The study shall involve the administration of a questionnaire to a total of 500 grade ten, and 500 grade twelve students in Edmonton's public and separate schools. The subjects will be selected at random, and given the test on a pre-arranged schedule during the month of May, 1966. Attempts are being made to develop a schedule which would ensure that the student would not miss any time from his classes.

Up until now, there have been no studies in this area that have tried to determine attitudes toward, and interests in physical activity, as well as to seek an explanation for the existence of such attitudes and interests. Therefore, this study could be of value in the following ways:

- (1) to determine what attitudes and interests actually exist,
- (2) to ascertain the relationship of interests and attitudes and the physical activity programs in Edmonton High Schools,
- (3) to provide information to support the possible redirection of physical activity programs in Edmonton High Schools and,
- (4) to aid in the development of a standardized test of adequate validity and reliability which could be used to incorporate various populations.

The above points indicate the importance and necessity of this study as a means for evaluating the existing physical education programs. Before proceeding any further, we would request your formal permission to use students in your school system as subjects for this investigation. If this is granted, arrangements shall be made with the principals of the various schools to receive their formal ratification.

Thank you very much for your cooperation and consideration.

Yours truly,

Dr. Maxwell Howell, Professor

Darwin Semotiuk, Graduate Student
Faculty of Physical Education
University of Alberta.

May 9, 1966.

:

You have been randomly selected to serve as a subject in answering a questionnaire concerning your attitudes toward, and interests in physical activity. The test will require approximately 40 minutes to complete. On the following date, you are requested to be in the following room, at the following time:

DATE _____, May _____, 1966

ROOM _____

TIME _____

Your cooperation would be appreciated,

Sincerely,

(Darwin Semotiuk)
Fitness Research Unit,
University of Alberta

DS:mc

May 9, 1966

To Whom It May Concern:

Your son/daughter has been randomly selected to serve as a subject in answering a questionnaire concerning his/her attitudes toward, and interests in physical activity. The test shall be administered in the high school, and shall take approximately 40 minutes to complete.

Any further information may be obtained by contacting:

Mr. Darwin Semotiuk
Faculty of Physical Education
University of Alberta.

Thank you very much for your cooperation,

Sincerely,

(Darwin Semotiuk)
Fitness Research Unit

DS:mc

Faculty of Physical Education
University of Alberta,
Edmonton, Alberta,
May 6, 1966.

Principal:

RE: TESTS ON ATTITUDES TOWARD INTERESTS
IN PHYSICAL ACTIVITY.

Just a reminder that we will be in your school on the following date, and testing at the following times.

DATE: TUESDAY, MAY 10, 1966

TIMES: GRADE 10'S _____

GRADE 12'S _____

PLACE: _____

Also, enclosed are the lists of the students to be tested, a copy of the notice given to the student, and a copy of the letter that will be given to the parent of each subject.

Sincerely,

(Darwin Semotiuk),
Faculty of Physical Education,
University of Alberta.

DS:mc

University Athletic Board,
University of Alberta,
Edmonton, Alberta,
May 11, 1966.

RE: ATTITUDES TOWARD AND INTERESTS
IN PHYSICAL ACTIVITY TESTS

I would personally like to thank you for the cooperation and assistance given to me in carrying out my study on attitudes and interests. I certainly appreciate this very much and am indebted to yourself and the students who participated in the project.

May I wish you continued success in the future.

Sincerely yours,

(Darwin Semotiuk)
Faculty of Physical Education

DS:mc

APPENDIX D

THE SEMANTIC DIFFERENTIAL

The Semantic Differential

The semantic differential is a relatively new instrument that is used in sociological and psychological testing

In essence the response comes in the form of "differentiating" the meaning of a concept. When a subject judges a concept against a series of scales, for example:

FATHER

happy ____:____:____:____:____:____:____: sad

slow ____:____:____:____:____:____:____: fast

hard ____:____:____:____:____:____:____: soft, etc.

each judgement represents a selection among a set of given alternatives and serves to localize the concept as a point in the semantic space.

By semantic differentiation, then, we mean the successive allocation of a concept to a point in the multidimensional semantic space by selection from among a set of given semantic alternatives. Difference in the meaning between two concepts is then merely a function of the differences in their respective allocations within the same space, that is, it is a function of the multidimensional distance between the two points.

The point in space which serves us as an operational definition of meaning has two essential properties--direction from the origin and distance from the origin. We may identify these properties with the quality and intensity of meaning, respectively. The direction from the origin depends on the alternative polar terms selected, and the distance depends on the extremeness of the scale positions checked.

The semantic differential is essentially a combination of controlled association and scaling procedures.

Firstly, we provide the subject with a concept to be differentiated. In this case we have provided the subject with seven concepts of attitudes toward physical activity and the ideal and perceived body image scores.

Second, we provide a set of bipolar adjectival scales against which to differentiate the concept. In this respect, he has to indicate, for each item, the direction of his association and its intensity on a seven-step scale.

The ~~ccrux~~ of the method, of course, lies in selecting the sample of descriptive polar terms. Ideally, the sample should be as representative as possible of all the ways in which meaningful judgements can vary, and yet be small enough in size to be efficient in practice. Here, Kenyon ran a pilot study and selected the better adjectival scales for the purpose of measuring attitudes.

Need for Approval Scale

In the construction of measures of individual differences in social-desirability response bias, we have seen that the usual procedure has been to draw a variety of items from a personality inventory and to have judges rate them as to their social desirability or undesirability. Those items which the judges unanimously regard as being highly socially desirable (or undesirable) statements to attribute to oneself constitute the social-desirability scale. Persons who endorse socially desirable items and reject socially undesirable ones are said to be demonstrating a social-desirability response set.

The following model was used for the development of the Marlowe-Crowne Social-Desirability scale: First, imagine a class of statements

that one might make about oneself which are defined by two major attributes: first, they are "good" culturally sanctioned things to say about oneself; and second, they are probably untrue of most people. Better yet, would be a balanced scale composed half of culturally acceptable but probably untrue statements and half of true but undesirable statements.

A set of fifty items was submitted to ten judges for social desirability ratings. The judges scored each item in the social desirability direction using true and false response categories. Unanimous agreement was reached on thirty-six items, and 90 per cent on eleven more.

The preliminary version of the scale was administered to seventy-six students, and an item analysis was undertaken. There were thirty-three items discriminating at the .05 level or better between high and low total scores. Of the thirty-three items, eighteen are keyed true and fifteen false, making an acquiescence interpretation highly improbable.

The reliabilities of the scale were:

- (1) .88 for internal consistency (Kuder-Richardson)
- (2) .88 on a test-retest.

Some results obtained on this scale are as follows:

Sample	Sex	No. of Cases	Mean	S.D.
Northwestern Univ.	Male	100	11.65	5.26
Introductory psychology students	Female	86	13.51	4.75
Insurance Co. Applicants	Female	285	24.62	4.96
California Prisoners	Male	80	16.73	6.04

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